US Army Corps of Engineers®
Little Rock District

White River, Augusta, Arkansas

Section 14 – Emergency Streambank Protection

August 2012

Draft Feasibility Report and Environmental Assessment

ABBREVIATIONS AND ACRONYMS

AFB	Alternative Formulation Briefing
ATR	Agency Technical Review
CAP	Continuing Authorities Program
Corps	U.S. Army Corps of Engineers
CPI	Consumer Price Index
EA	Environmental Assessment
EIS	Environmental Impact Statement
EL	Elevation
ENR	Engineering News Report
EOP	Environmental Operating Principles
ER	Engineering Regulation
EWDAA	Energy and Water Development Appropriations Act
FCA	Flood Control Act
FCSA	Feasibility Cost Sharing Agreement
FONSI	Finding of No Significant Impact
FT	Feet
FY	Fiscal Year
IEPR	Independent External Peer Review
LERRD	Lands, Easements, Rights-of-Way, Relocations, and Disposal Areas
MSC	Major Subordinate Command
NED	National Economic Development
NEPA	National Environmental Policy Act
O&M	Operation & Maintenance
PDT	Project Delivery Team
PFMA	Potential Failure Mode Analysis
PPA	Project Partnership Agreement
PL	Public Law
RM	River Mile
RP	Review Plan
SWD	U.S. Army Corps of Engineers, Southwestern Division
SWL	U.S. Army Corps of Engineers, Little Rock District
USACE	U.S. Army Corps of Engineers
WRDA	Water Resources Development Act

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1.0 INTRODUCTION

1.1 **Study, Authority & Location**

The White River, Augusta, Arkansas, study was authorized by Section 14 of the Flood Control Act of 1946, as amended (P.L.79-526), Emergency Streambank and Shore Protection. The purpose of the Section 14 program is to construct emergency streambank and shore protection to prevent natural erosion processes from damaging highways, highway bridge approaches, public works, churches, public and private non-profit hospitals, schools, water and sewer lines, and other public or non-profit facilities that offer public services to all, and known historic properties eligible or listed on the National Register of Historic Places.

If an eligible facility is in imminent danger of failure, and after a request for a project has been received from a potential non-Federal sponsor stating its desire to participate in a solution, the Corps can conduct a feasibility study to analyze the problem, develop the solution, and determine the feasibility of erosion protection. In the Feasibility Phase, the first $100,000 is 100% federally funded. Any additional feasibility study costs would require an executed Feasibility Cost Sharing Agreement (FCSA), stating all costs that exceed $100,000 would be cost-shared 50% federal and 50% non-federal.

Upon completion of the Feasibility Phase, if a project is recommended for implementation, the project will move to the Design and Implementation Phase. All costs beyond the Feasibility Phase are considered total project costs and are cost-shared 65% Federal and 35% non-Federal. A minimum of 5% of the cost must be provided in cash. The remainder of the cost can be in cash or work-in-kind. Steps in this phase include execution of a Project Partnership Agreement (PPA), preparation of the plans and specifications, Clean Water Act Section 404 and 401 regulatory compliance, National Environmental Policy Act (NEPA) compliance, construction contract award, and project construction. The PPA defines the obligations of the federal government and the sponsor in the construction, maintenance, and cost sharing of the project.

The study will identify the least cost alternative. The recommended plan is considered to be justified if the total cost is less than the costs to relocate the threatened facility. No more than 12 months should pass between the start of the Feasibility Phase and the time the project is ready for construction. Federal costs are limited to not more than $1,500,000 in one locality. Cost of lands, easements, rights-of-way, relocations of utilities, disposal areas, and the operation and maintenance of the project is a non-federal responsibility.

The sponsor is the City of Augusta, Arkansas, located approximately 75 miles north of Little Rock, Arkansas. The project area is located along the east bank (left descending bank) of the White River in the city limits of Augusta, Arkansas, in Woodruff County. The project boundaries are between River Mile (RM) 198.0 and RM 197.5 on the White River. Figure 1 is a map of the project location.

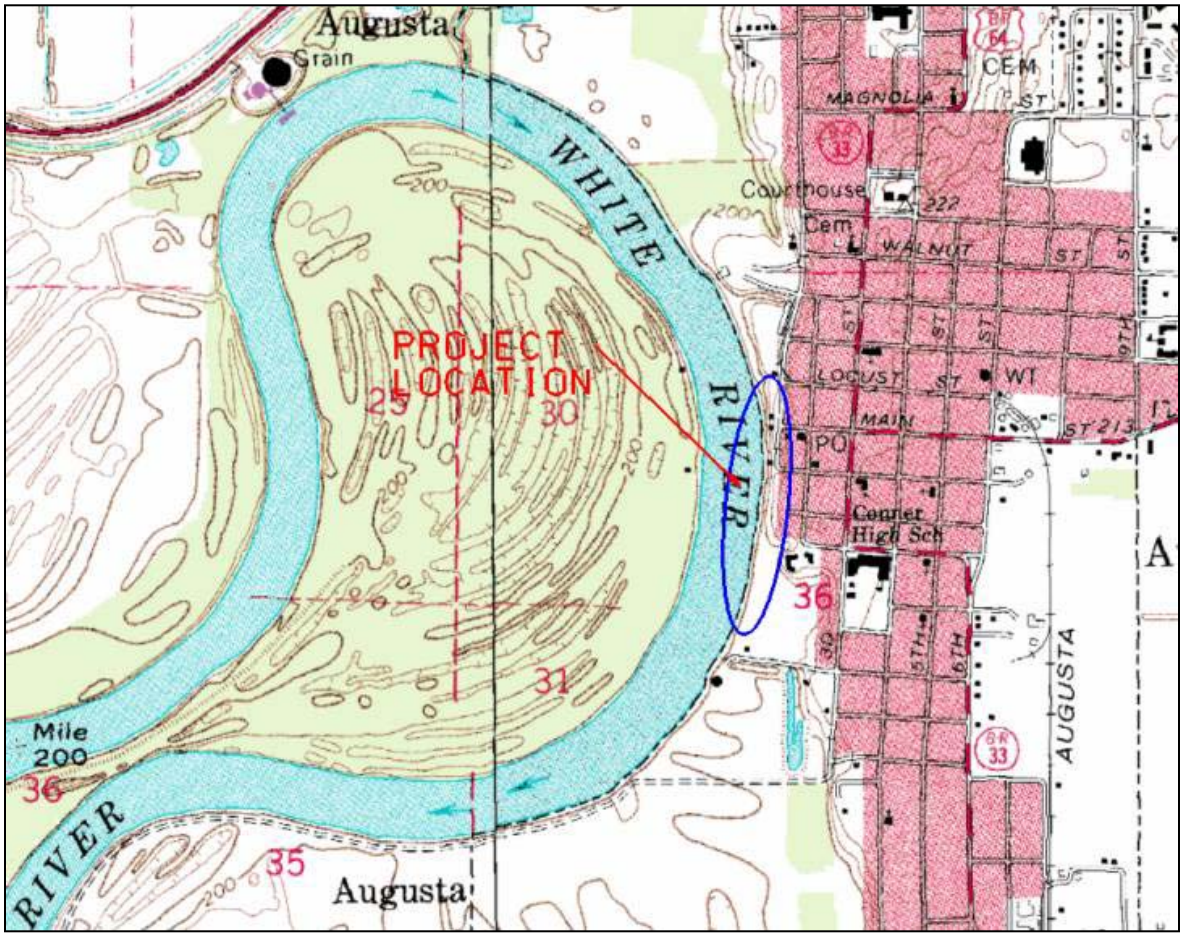


Figure 1: Project Location

1.2 **Problems and Opportunities**

Bank erosion is occurring along the left bank of the White River between RM 198.0 and RM 197.5 threatening an underground city sewer main, a city access road, and two historic sites. Large portions of the embankment slid off into the river after heavy rains in the spring of 2008 and 2009. The City of Augusta maintains a 15 inch ductile iron sewer main running parallel to the river for approximately 1,800 feet. This sewer main carries effluent from city to the waste water treatment facility located approximately 3,500 feet south of the study area. The sewer main provides sewer services for 2,665 users in the City of Augusta. If the embankment continues to deteriorate, Augusta could lose up to 1,500 linear feet of their sewer main, a city road with parking lot, the historic American Legion Hut, and a historic cultural resource button factory site. Failure of the sewer main will cause significant environmental damages. There are three mussel species of state conservation concern in this vicinity of the river that would be harmed by a sewer main failure.

High water events in the spring of 2008 and 2009 further intensified the erosion problems. The erosion along approximately 0.4 miles of river bank resulted in the horizontal loss of the bank about 10 feet landward. Prior to these flooding events, the bank was full of vegetation, consisting of several large 3 to 4 foot diameter trees. As soon as the water receded, it became evident the 15-inch ductile iron sewer main was in danger of being exposed. The City of Augusta has placed riprap on sections of the bank attempting to halt the erosion with very little success. The severe erosion along approximately 1,950 feet of river bank resulted in the accelerated horizontal loss of the bank 10 feet landward.

The opportunity exists to protect the City of Augusta's sewer main, access road, historic American Legion Hut and historic button factory site by stabilizing the White River bank adjacent to these facilities.

The following photos show the erosion on the bank adjacent to the sewer main:

Figure 2: Looking Upstream

Figure 3: View of Left Descending Bank (Downstream View)

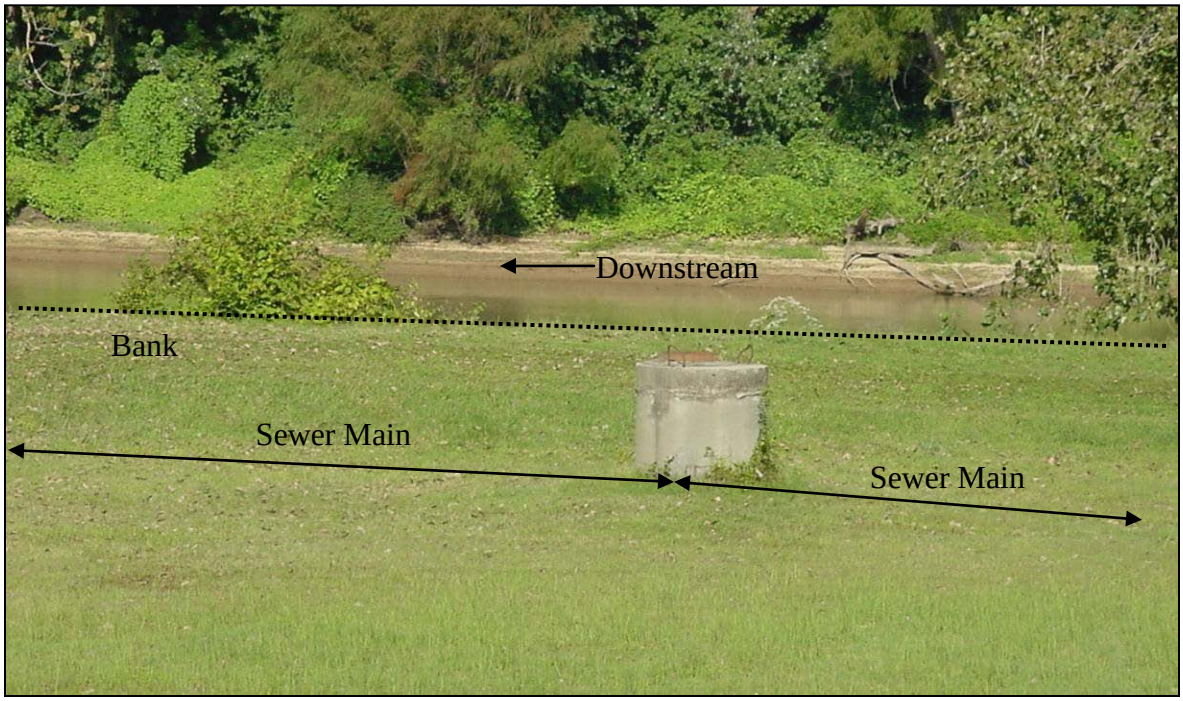


Figure 4: Sewer Main Location

2.0 ALTERNATIVES

2.1 **Alternative 1: No Action Plan: Relocation of Sewer Main and Historic Structure.**

Under the No Action alternative (also referred to as the 'Without Project Condition' alternative), the City of Augusta would relocate approximately 1,500 linear feet of sewer main away from the continually eroding riverbank and place it under city streets. The alternative would include relocating one historic structure and a city road. The city would do this to avoid failure of the sewer main and the environmental consequences of sewage into the White River in the absence of Federal action.

2.2 **Action Alternatives**

2.2.1 **Preliminary:**

Other schemes and alternatives were considered and rejected throughout the process, including using bendway weirs and bioengineering methods. Bioengineering provides a lower, less permanent level of protection and also poses the threat of early failure due to the length of time required to establish an adequate root system. Large houseboats moor adjacent to the riverbank creating a safety hazard with bendway weirs.

The two remaining plans provide equal benefits using different designs. Both were explored to discover if there would be savings with one plan over the other.

2.2.2 **Alternative 2: Full Length Longitudinal Fill Stone Toe Protection.**

Alternative 2 consists of 1950 feet of longitudinal fill stone toe protection (LFSTP). The LFSTP will be placed parallel to the bank with a crest elevation of 195.5 ft, NAVD88, a 10 foot bench width, and 1.5H:1V side slope. The downstream end will be tied into an existing revetment built by Bunge Corporation. The upstream end will end at the Arkansas Game and Fish Commission launching ramp and will be tied back into the existing bank 40 ft.

This alternative will stabilize the bank by providing launchable stone to fill future scouring at the toe of the structure. O&M will consist of visual inspections that can be done at little cost to the sponsor. The material quantities required are shown in Table 1. Typical cross-section for Alternative 2 is shown in Figure 5, detail A.

A site map of the project location and Alternative 2 features is shown in Figure 6.

2.2.3 **Alternative 3: Longitudinal Fill Stone Toe Protection with Bank Paving.**

Alternative 3 consists of approximately 1300 ft of longitudinal fill stone toe protection (LFSTP) with bank paving on the upstream portion of the project and approximately 650 of bank paving only on the downstream portion. The LFSTP will be placed parallel to the banks with a crest elevation of 193.5 ft, NAVD88, 10 ft bench width, and 1.5H: 1V side slope. Above the LFSTP, a two (2) foot thickness of bank paving will be placed to elevation 195.5 at a 1.5:1 slope. The 650 foot long bank paving portion will include excavating the existing bank back to a 2H: 1V slope and placing a three (3) foot thickness of full bank paving at the same grade with a key trench excavated at the toe elevation of 175 ft, and rebuilding an existing berm at the top of the bank at this bank paving portion.

This alternative will stabilize the bank by providing launchable stone upstream to fill any future scouring of the toe, and the armored bank downstream will prevent bank sloughing and future horizontal bank loss. The downstream end will be tied into an existing revetment built by Bunge Corporation. The upstream end will end at the Arkansas Game and Fish Commission launching ramp and will be tied back into the existing bank 40 ft. This design was suggested by the City of Augusta's engineer.

O&M will consist of visual inspections that can be done at little cost to the sponsor. The material quantities for this alternative are shown in Table 1.

Typical cross sections of Alternative 3 are displayed in Figure 5, detail B and detail C.

Table 1: Estimate of Quantities - based on average bank height and slopes

Alternatives	Relocate sewer main	Longitudinal Fill Stone Toe Protection and keys	Bank Paving and keys	Excavation	Clear and Grub, Seeding
1 No Action	Yes	0	0	0	0
2 Full Length LFSTP	No	13,888 Tons	0	148 CY	2,167 SY
3 LFSTP with Bank Paving	No	12,328 Tons	4,741 Tons	5,810 CY	2,167 SY

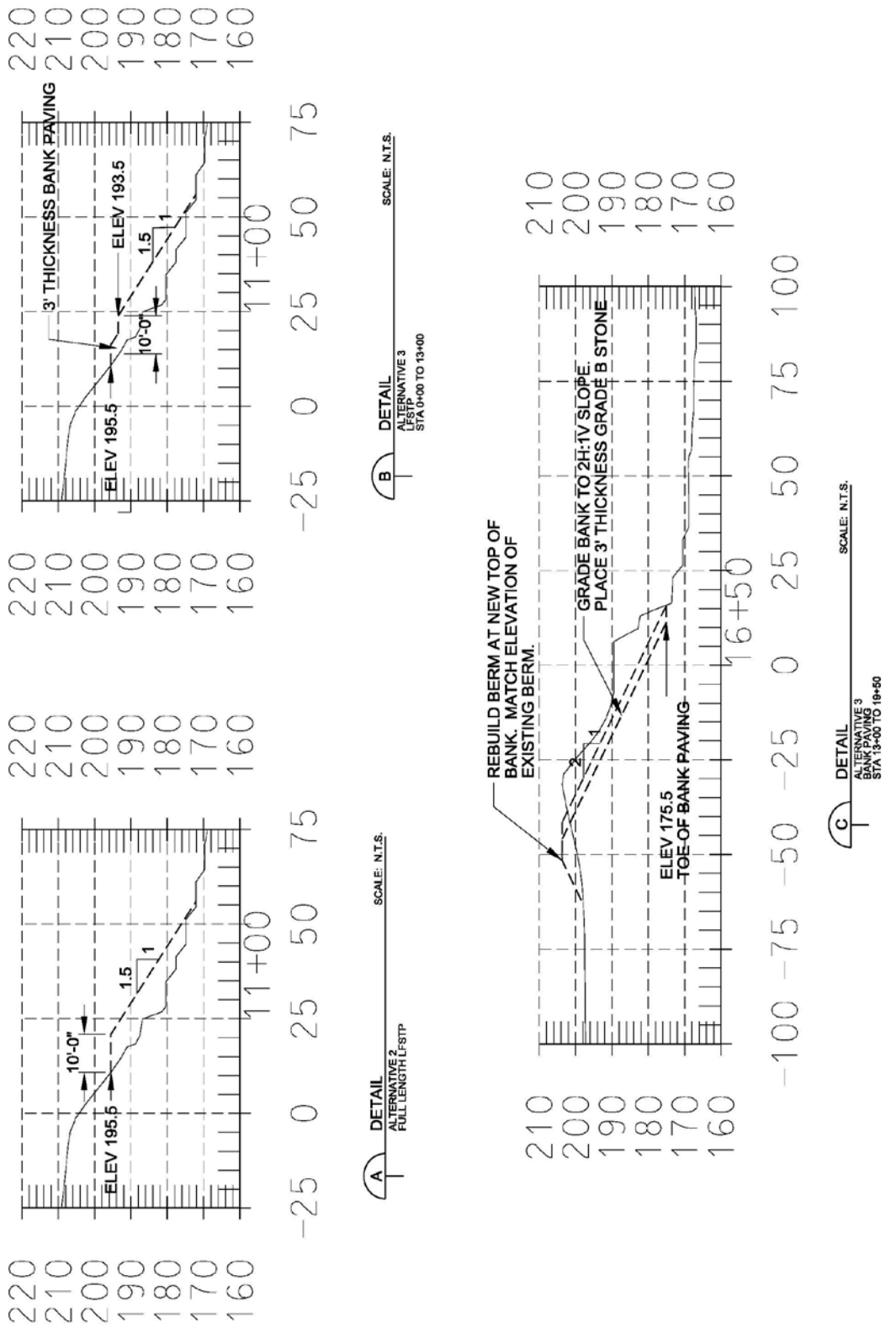


Figure 5: Typical Cross Sections of Alternative 2 (detail A) and Alternative 3 (detail B and C).

2.3 **Estimated Cost of Alternatives**

Table 2 summarizes the estimated Project Cost (not Fully-Funded) of the three alternatives at May 30, 2012 price level.

Table 2: Estimated Project Cost of Alternatives

City of Augusta, Arkansas - Section 14			
Feature	**Alt 1**	**Alt 2**	**Alt 3**
Construction Contract Cost	$959,000	$793,000	$1,014,000
Engineering & Design	$94,000	$51,000	$64,000
Construction Management	$66,000	$69,000	$89,000
LERRD	$31,000	$75,000	$75,000
TOTALS	**$1,150,000**	**$988,000**	**$1,242,000**

Figure 6: Project Features, Alternative 2.

3.0 ALTERNATIVE ANALYSIS

3.1 **Economic Analysis**

The benefits of the bank stabilization project are the savings from not relocating the sewer main. The net benefits are the difference in cost between Alternative 1, Alternative 2 and Alternative 3. Table 3 summarizes the analysis.

The annual net benefit of each alternative is the difference between the annual costs of the No Action plan and the Alternatives. Alternative 2 has annual net benefits of $7,700. The benefit-to-cost ratio is the ratio of the annual cost of the No Action plan compared to the annual cost of Alternative 2, which is 1.2 to 1. As the benefit-to-cost ratio of Alternative 2 is greater than 1.0, Alternative 2 is economically justified. Alternative 3 has a cost to benefit ratio of less than 1.0 and is therefore not economically justified.

Table 3: Economic Analysis*

	Alt 1: ' No Action' Relocation of Sewer Main And Historic Structure	Alt 2: Full Length Longitudinal Fill Stone Toe Protection	Alt 3: Longitudinal Fill Stone Toe Protection with Bank Stabilization
Construction Contract Cost	$959,000	$793,000	$1,014,000
Engineering & Design	94,000	51,000	64,000
Construction Management	66,000	69,000	89,000
LERRD	31,000	75,000	75,000
Project First Cost	1,150,000	988,000	1,242,000
Interest Rate	4.00%	4.00%	4.000%
Construction Period, years	0.5	0.5	0.5
Interest Rate Monthly	0.327%	0.327%	0.327%
Economic Life	50	50	50
Interest During Construction	$9,500	$8,100	$10,200
Investment Cost	$1,159,500	$996,100	$1,252,200
Annual Cost			
Interest	46,400	39,800	50,100
Amortization	7,600	6,500	8,200
Total Annual Cost	$54,000	$46,300	$58,300
Net Annual Benefits	–	$7,700	$(4,300)
Benefit to Cost Ratio		**1.20**	**0.93**

*Using Estimated Costs (not fully funded) at May 30, 2012 price level

O&M for Alternative 2 and Alternative 3 will consist of visual inspections that can be done at little cost to the sponsor.

3.2 **Environmental Impacts**

The proposed actions will not result in any significant impacts to the human environment. Minor construction related impacts will occur to the following resources:

- Water (increased turbidity)
- Biological (vegetation removal, air (emissions and dust))
- Noise (construction equipment and vehicles)

Environmental compliance is on-going and will be completed prior to construction. For detailed information on environmental compliance see page 5 of Appendix A, section titled 'Status of project with Applicable Law and Statutes'.

Section 404 and Section 10 permits will be obtained prior to start of construction.

3.3 **Views of the Public and other Agencies**

The Arkansas Natural Heritage Commission (ANHC) indicated there were three mussel species of state concern: the Purple Wartyback (*Cyclonaias tuberculata*), the Hickorynut (*Obovaria olivaria*), and the Monkeyface (*Quadrula metanevra*), which the ANHC identified at locations upstream of the project area. The proposed actions will not adversely affect these species. The U.S. Fish and Wildlife Service (USFWS) indicated that they were not aware of any federally listed species in the vicinity of the project area. Other agencies contacted either expressed support or declined to object to the proposed project. Comment letters are in Appendix A.

4.0 THE RECOMMENDED PLAN

Alternative 2, Full Length Longitudinal Stone Toe Protection, is the recommended plan because it is economically justified with a cost to benefit ratio of 1.2 to 1 and with the greatest excess benefits over cost. This plan will provide the most economical protection for the lower bank. This plan will eliminate most of the risk of exposing the sewer main due to losing the top bank. Alternative 2 provides a high level of protection for the sewer main, historic structure, access road with parking, and the button factory site without resulting in significant impacts to the environment.

5.0 IMPLEMENTATION

Completion of this report by the Little Rock District Engineer must occur before the project can be constructed. Upon completion of the feasibility phase, the project will move to the design and implementation phase. Steps in this phase include execution of a Project Partnership Agreement (PPA), preparation of the plans and specifications, Clean Water Act Section 404 and 401 regulatory compliance, National Environmental Policy Act compliance, construction contract award, and project construction. These steps are described in further detail as follows:

a. The non-federal sponsor, City of Augusta, Arkansas, must declare their intent in a letter (see Appendix C) to enter into a PPA for the design and construction of the project. This letter must state they are willing and have the authority to sign a PPA.

b. The report and EA must go out for public review for 30 days. The final report must be approved by the Division Commander.

c. The PPA must be executed.

d. Plans and specifications for construction of the project must be completed by the Army Corps of Engineers.

e. Project lands, easements, rights-of-way, access routes, relocations, and disposal areas must be acquired by the sponsor, and rights-of-entry must be provided to the Corps.

f. A cash contribution, equal to at least 5% of the project cost, must be provided by the sponsor. An additional cash contribution, such that the total non-Federal share equals 35%, must also be provided by the sponsor.

g. Construction contracts must be advertised and awarded.

5.1 **Federal and Non-Federal Cost Sharing**

The non-Federal sponsor is responsible for a minimum of 35% and a maximum of 50% of total project costs. In accordance with the terms of the PPA, the non-Federal sponsor must pay 5% of total project costs in cash and provide all lands, easements, rights-of-way, relocations, and disposal areas (LERRD's) required for the project. If the value of the non-Federal sponsor's contributions listed above is less than 35% of the total project costs, the non-Federal sponsor must pay additional cash contribution, so that its total contribution equals 35% of the total project costs. The Federal project limit is $1,500,000.

The total fully-funded project cost of Alternative 2 is $1,010,000 of which 35% is $353,500. The 5% cash contribution is $50,500 and the LERRD's are $76,000. Of this $76,000 LERRD, $69,880 is sponsor credit and $6,120 is Federal review cost. An additional cash or work-in-kind contribution of $233,120 from the sponsor is required. The City of Augusta will be providing this portion as work-in-kind. The Federal Cost Share is $656,500. The City of Augusta's work-in-kind will consist of the City of Augusta issuing and managing a separate contract to construct a portion of the bank protection equivalent to their remaining share, using the same design and details as the Federal portion.

Table 4 summarizes the Federal and non-Federal cost share for Alternative 2.

Table 4: Summary of the Federal and Non-Federal Fully Funded Costs For Alternative 2

Feature	Federal Cost	Non-Federal Cost	Total Cost
LERRD	$6,120	$69,880	$76,000
Design & Implementation Costs:			
Construction	$809,000	$0	$809,000
Engineering & Design	$53,000	$0	$53,000
Construction Mgmt	$72,000	$0	$72,000
TOTALS	$940,120	$69,880	$1,010,000
Cash Contribution (5%)	($50,500)	$50,500	$0
Local Cost Share to meet (35%) Requirement (to be done as Work In Kind)	($233,120)	$233,120	$0
FINAL COST ALLOCATION	$656,500	$353,500	$1,010,000
COST SHARE PERCENTAGES	65%	35%	100%

5.2 Federal Responsibilities

The Corps would be responsible for the preparation of the plans and specification as well as the construction of a majority of the bank stabilization project. Project construction is contingent upon the sponsor and the Corps of Engineers signing a Project Partnership Agreement (PPA).

5.3 Non-Federal Responsibilities

Prior to implementation, the non-federal sponsor is responsible for the following:

a. Provide without cost to the United States all lands, easements, rights-of-way, access routes, relocations, and disposal areas necessary for project construction.

b. In accordance with the Water Resources Development Act of 1986 (PL 99-662), provide a cash contribution equal to at least 5 % of the total project cost. This cash contribution is currently estimated at $50,500 and should be provided before the Federal contract for construction is advertised for bidding.

c. Provide additional cash contribution such that the total non-Federal share is equal to 35 % of the project cost. This additional cash contribution, which the sponsor plans to provide as work-in-kind, is estimated at $233,120.

d. Hold and save the United States free from damages caused by the construction, operation, and maintenance of the project, excepting damages due to the fault or negligence of the United States or its contractors.

e. Maintain and operate the project after completion without cost to the United States.

f. Assume full responsibility for all project costs in excess of the Federal cost limitation of $1,500,000.

g. Execute a Project Partnership Agreement (PPA) incorporating all required measures of local cooperation. Appendix I contains a copy of the draft PPA.

5.4 Sponsor's Financial Plan

The City of Augusta's Letter of Intent, dated March 07, 2011, stating their willingness to cost share in implementing the project, is included in Appendix D. The sponsor's Self-Certification of Financial Capability, stating their ability to cost share in implementing the project, is included in Appendix E. The sponsor is going to construct a portion of the project to meet their additional cost share requirement. They have secured a grant from the Arkansas Community and Economic Development Program.

5.5 Real Estate Requirements

The recommended plan will require stabilizing the left descending bank of the White River between RM 197.5 and RM 198.0 and will involve approximately 3.18 acres of land. The following real estate easements are required to implement the proposed plan.

- Bank Stabilization Area of 2.20 acres
- Staging Area easement of 0.60 acres
- Road Access easement of 0.38 acres
- A map of the real estate easements is in Appendix B, Real Estate Plan. The costs for these easements are estimated at $76,000. The lands to be acquired are not part of the facilities being protected.

5.6 Schedule

Project approval and a commitment of Federal funds for construction will be requested. Once received, the PPA will be executed, followed by advertising and awarding a contract. Listed below are the major project milestones and the expected completion dates.

- Receive Project Approval and Federal Design & Implementation Funds- August 29, 2012
- Sign PPA and request sponsor's funds- September 07, 2012
- Complete plans and specification package- January 31, 2013
- Certify Real Estate land acquisition – April 9, 2013

- Advertise – April 10, 2013
- Bid Opening – May 13, 2013
- Contract Award – June 28, 2013
- Start Construction – July 01, 2013
- Complete Construction – October 25, 2013

6.0 CONCLUSIONS AND RECOMMENDATIONS

A serous bank erosion problem is occurring along the right bank of the White River between RM 197.5 and RM 198.0, threatening an underground sewer main, city access road to the river, one historic structure, and one historic cultural resource. This sewer main carries effluent from the City of Augusta to the Augusta Wastewater Treatment Facility and provides service to 2, 665 users in the City of Augusta. If the embankment continues to deteriorate the City of Augusta could lose a large portion of their underground sewer main, the historic Augusta American Legion Hut, and the historic button factory site.

The recommended plan is Alternative 2, Full Length Longitudinal Fill Stone Toe Protection, because it will provide protection for the entire bank by providing launchable stone upstream to fill any future scouring of the toe, eliminating most of the risk of losing the top bank and exposing the water line. This alternative provides the most economical level of streambank protection with a benefit to cost ratio of 1.2. The fully funded project cost of Alternative 2 is $1,010,000.

The City of Augusta is willing and financially capable of cost sharing in the project construction. The Corps of Engineers finds that the recommended plan will have no significant adverse environmental impacts, and an Environmental Impact Statement according to the National environmental Policy Act of 1969 (PL 91-190) is not required. Therefore, the Corps of Engineers recommends that the recommended plan, as described in this report, be approved for implementation under the authority of Section 14 of the Flood control Act of 1946, as amended.

Date:_____ _____

Glen A. Masset
Colonel, U.S. Army
District Engineer

Appendix A – (Draft) Environmental Assessment with FONSI

White River, Augusta, Arkansas,

Woodruff County, Arkansas

SECTION 14

CITY OF AUGUSTA, AR-WHITE RIVER BANK STABILIZATION

Woodruff County, AR

FINAL
ENVIRONMENTAL ASSESSMENT

August 2012

U.S. ARMY CORPS OF ENGINEERS
LITTLE ROCK ENGINEER DISTRICT
LITTLE ROCK, AR

1.0 INTRODUCTION

1.1 Purpose and Need of the Proposed Action

Augusta is located approximately 60 miles northeast of Little Rock and about 20 miles east of Searcy, Arkansas. The City of Augusta is the sponsor, and requested assistance with a bank erosion problem by phone in the summer of 2010. A site visit was conducted with the sponsor on 31 August 2010. A large amount of bank erosion is occurring along the outward bend of the White River at Augusta. The riverbank is eroding endangering access to a local city road and a sewer line that parallels the river bank in the proposed project area. The possibility also exists for damages to historical site located on the endangered city road by continued erosion of the riverbank. Stream bank stabilization is needed along the east bank of the White River for approximately 2,000 feet at this location. Other alternatives might include relocation of imperiled buildings, and the existing sewer line. Recreational opportunities and wildlife habitat areas could be improved along the river corridor. The project benefits would include a reduction in flood damages, protection of existing sewer works and bank stabilization.

This environmental assessment is being conducted by the Little Rock District, U.S. Army Corps of Engineers (USACE) in accordance with the Council on Environmental Quality (CEQ) guidelines pursuant to the National Environmental Policy Act (NEPA) of 1969.

1.2 Project Location

The study is located along the east bank (left descending bank) of the White River in the city limits of Augusta, Arkansas, in Woodruff County. Bank stabilization is needed along the east bank of the White River to protect an adjacent sewer line and a city road. Figure 1 is a map of the project location.

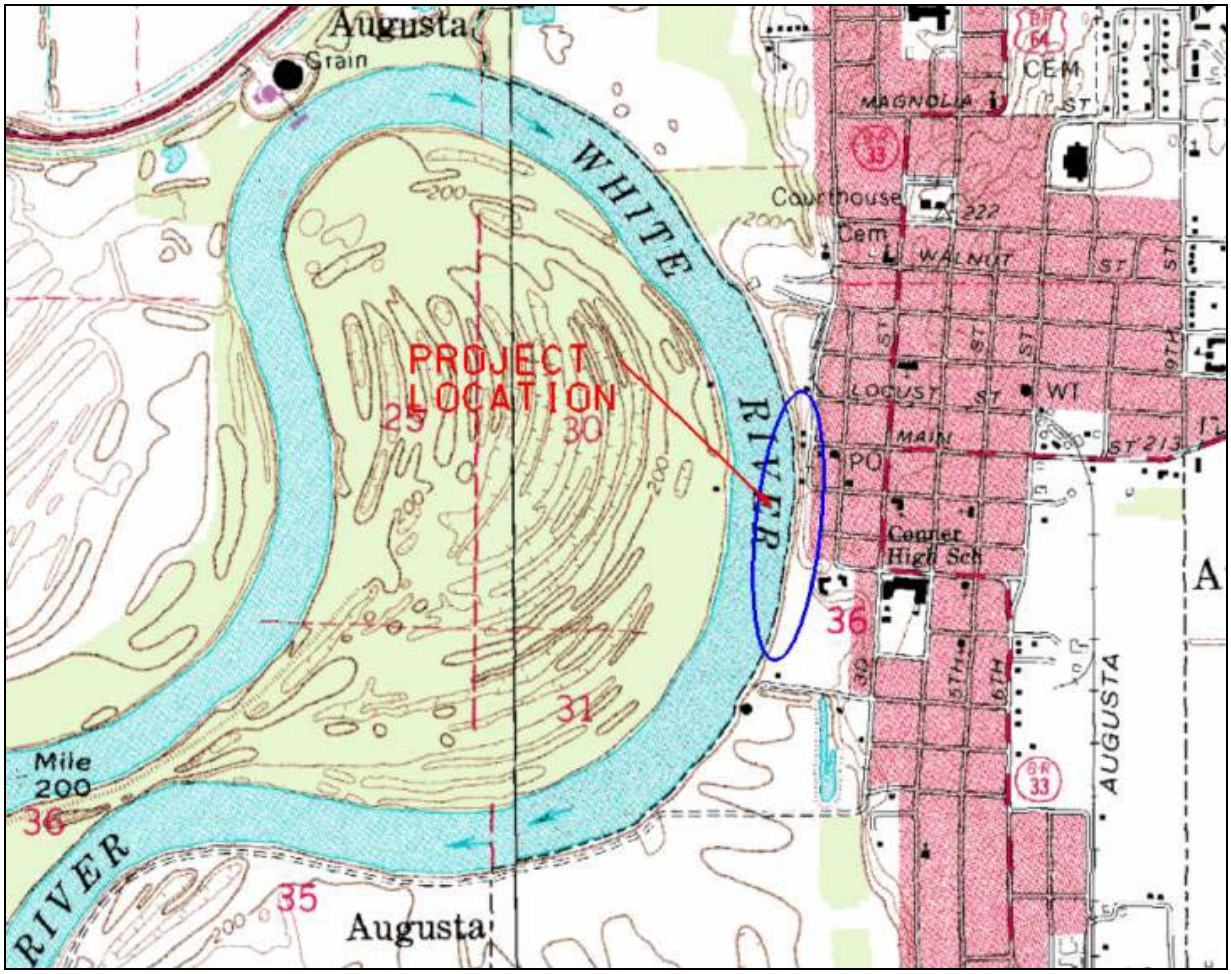


Figure 1: Project Location

1.2 Environmental Compliance

Environmental compliance is an on-going process and will be completed prior to initiating construction activity. As seen in the table below, compliance with the Clean Water Act, Rivers and Harbors Act, and the Arkansas Water Quality Standards are listed as being partially fulfilled. Section 404 and Section 10 permits will be obtained, as well as a Short Term Activity Authorization (STAA) from the State of Arkansas, which authorizes a temporary excursion from the turbidity water quality standard during construction of the project. Once the permits for the project are secured, then all applicable Federal and State requirements will be in full compliance.

Status of Project with Applicable Laws and Statutes

Item	Compliance
FEDERAL STATUTES Archaeological and Historic Preservation Act, as amended, 16 U.S.C. 469, et. Seq.	Full
Clean Air Act of 1977, as amended, 42 U.S.C. 7609, et. seq.	Full
Clean Water Act, as amended, (Federal Water Pollution Control Act) 33 U.S.C. 1251, et. seq.	Partial
Coastal Zone Management Act, 16 U.S.C. 1451, et. seq.	N/A
Endangered Species Act, 16 U.S.C. 1531, et. seq.	Full
Estuary Protection Act, 16 U.S.C. 1221, et. seq.	N/A
Federal Water Project Recreation Act, 16 U.S.C. 460-12, et. seq.	Full
Fish and Wildlife Coordination Act, 16 U.S.C. 661, et. seq.	Full
Land and Water Conservation Fund Act, 16 U.S.C. 460/ -460/-11, et. seq.	N/A
Marine Protection, Research and Sanctuary Act, 33 U.S.C. 1401, et. seq.	N/A
National Environmental Policy Act, 42 U.S.C. 4321, et. seq.	Full
National Historic Preservation Act, 16 U.S.C. 470a, et. seq.	Full
Rivers and Harbor Act, 33 U.S.C. 401, et. seq.	Partial
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, et. seq.	N/A
Wild and Scenic Rivers Act, 16 U.S.C. 1271, et. seq.	Full
Executive Orders, Memorandums, etc. Executive Order 11988, Floodplain Management, May 24, 1977 (42 CFR 26951; May 25, 1977)	Full
Executive Order 11990, Protection of Wetlands, May 24, 1977 (42 CFR 26961; May 25, 1977)	Full
Council on Environmental Quality Memorandum of August 11, 1980: Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act.	Full
Executive Order 12114, Environmental Effects Abroad of Major Federal Actions.	N/A
STATE AND LOCAL POLICIES Arkansas Water Quality Standards	Partial

Note: The compliance categories used in this table were assigned based on the following definitions:

a. Full Compliance – All requirements of the statute, executive order, or other policy and related regulations have been met for this stage of planning.
b. Partial Compliance – Some requirements of the statute, executive order, or other policy and regulations remain to be met but if applicable will be met before construction commences (i.e. 404 permits and State short term activity authorization).
c. Noncompliance – None of the requirements have been met for this stage of planning.
d. Not Applicable – Statute, executive order, or other policy not applicable.

1.4 Project Authority and Regulatory Requirements

The U.S. Army Corps of Engineers, Little Rock District is conducting this project under the authority of Section 14 of the Flood Control Act of 1946 as amended. The purpose of the Section 14 program is to construct emergency stream bank and shoreline protection to prevent natural erosion processes from damaging highways, highway bridge approaches, public works, churches, public and private non-profit hospitals, schools, and other public or non-profit facilities offering public services.

The proposed action will require the excavation and disposal of fill material below the ordinary high water mark (OHW) between RM 198.0 and 197.5 on the White River. This work below the OHW will require a Clean Water Act section 404 permit. In addition, since the White River is a navigable stream, a Section 10 permit from the River and Harbors Act of 1899 will also be needed. Both permit requirements, issued as a single permit with reference to both authorities, will be obtained prior to construction of the proposed action. Since Augusta is within the western edge of the Memphis District Corps of Engineers, they will issue the 404 (b) (1) guidelines and the Section 404 and Section 10 permit. Due to the length of the proposed stabilization, a waiver for the nationwide permit will be issued. A copy of a Section 404 Nationwide Permit 13 is attached as Appendix B**.**

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 DESCRIPTION OF THE PROPOSED ACTION

The recommended alternative for solving the erosion problem adjacent to the city road and sewer line is to implement Alternative 2 (see figure 2), which consists of 1950 feet of longitudinal fill stone toe protection (LFSTP) that provides protection from further toe erosion. The launchable stone will applied to produce a 1.5H: 1V slope. The stone will be placed at the bottom of the riverbank slope with a thickness to provide a 10 foot wide bench and a crest elevation of 195.5 feet. The downstream end will be tied into an existing revetment built by Bunge. The upstream end will end at the Game and Fish launching ramp and will be tied back into the existing bank 40 feet.

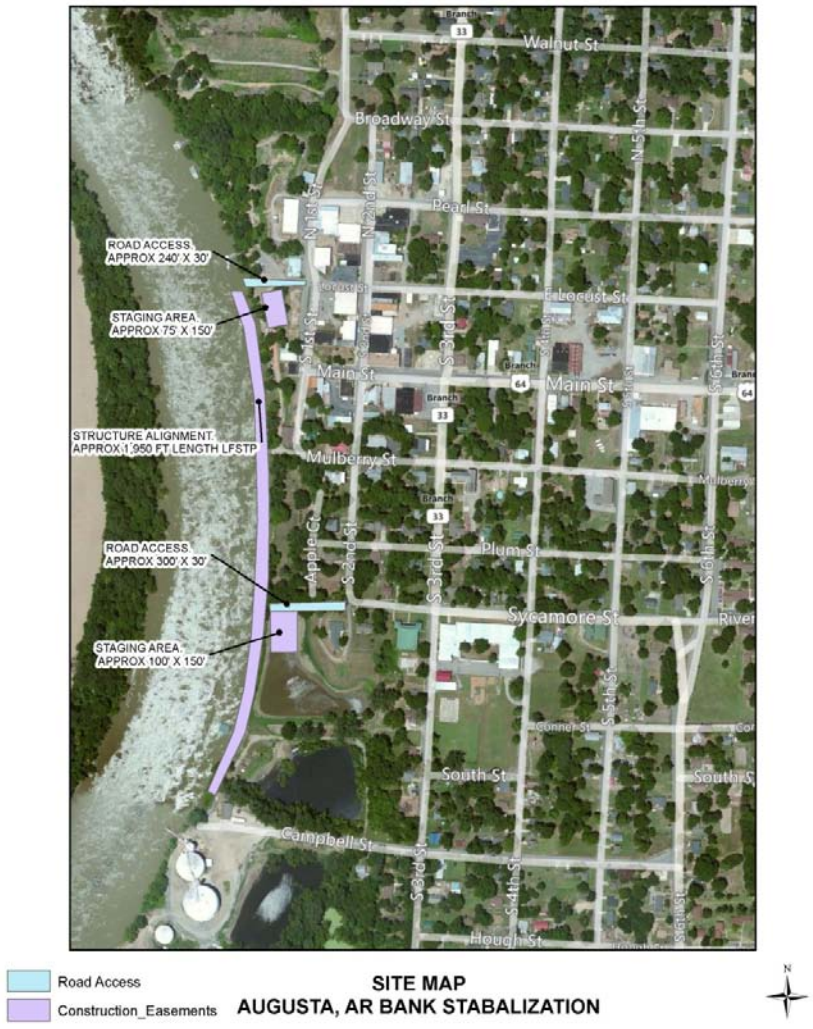


Figure 2 - Alternative 2

2.2 Alternatives to the Proposed Action

Other alternatives to the proposed action have been considered to prevent and rectify erosion of the bank: (1) Alternative 1 (no action) will allow continued erosion of the river bank in the project area. Degradation will continue to occur and may possibly result in a loss of use of the city road, with restricted access to the river, and loss of the sewer line, necessitating relocation. . (3) Alternative 3 consists of the placement of approximately 1300 feet of longitudinal stone toe protection, with bank paving on the upstream portion of the project and approximately 650 feet of bank paving only on the downstream portion. The LFSTP will be placed parallel to the bank with a crest elevation of 193.5 feet, 10 foot wide bench and 1.5H: 1V side slope. Above the LFSTP a two foot thick bank paving will be placed to elevation 195.5 at a 1.5:1 slope. The 650 foot long bank paving portion will include excavating the existing bank back to a 2H: 1V slope and placing a three foot thick full bank paving at the sane grade with a key trench excavated at the toe elevation of 175 feet. This alternative will stabilize the bank by providing launchable stone upstream to fill any future scouring of the toe, and the armored bank downstream will prevent bank sloughing and future horizontal bank loss. The downstream end will be tied to an existing revetment built by Bunge. The upstream end will stop at the Game and Fish launching ramp and will be tied back into the existing bank 40 feet. Other alternatives were considered and rejected, such as bendway weirs and upper bank bioengineering. Bioengineering provides a lower, less permanent level of protection and also poses the threat of early failure due to the length of time required to establish an adequate root system. Large houseboats moor adjacent to the riverbank, creating a safety hazard with bendway weirs. Alternative 3 drove up the costs of implementation significantly without affording a cost effective increase in erosion protection, therefore this alternative was not evaluated further.

2.3 No Action Alternative.

Acceptance of a “no-action” plan would result in the continued erosion of the right descending bank of the White River between approximately RM 198.0 and RM 197.5. The end result will be the eventual compromise of an adjacent city road, and the compromise of an existing sewer line which parallels the river bank at this location. Under this no action alternative, the City of Augusta will be responsible for relocating approximately 1,500 feet of 15-inch sewer line away from the eroding riverbank. There is also an historic building and an historic site that will also need to be relocated and/or protected.

Table 2 Summary of the Potential Effects of the Proposed Action and Alternatives

Resource	Proposed Action Alternative 2	Alternative 3	No Action Alternative 1
Land Use	Land use would remain the same. The project area would be stabilized and no longer endanger the city road, sewer line and historic building.	Current urban land use would be disrupted due to relocation of the city street, sewer line and historic building.	Continued erosion of the bank will eventually cause damage to the city road, historic building and the sewer line.
Water Resources	Temporary construction related increase in turbidity will occur. Stabilization of the riverbank will decrease current scouring, which is currently causing higher levels of turbidity in the river.	Same as proposed action.	Continued scouring will increase turbidity in this portion of the White River.
Cultural Resources	The proposed project will avoid damage to the known site within the project area by bringing in fill to add to the existing bank. The area that will be cut back has been surveyed and no cultural resources were recorded. This type of project will not affect the integrity of the historic structure near the project area. Therefore, no known historic properties will be affected by this undertaking.	Same as proposed action	Continued scouring would destroy the known site in the project area, threaten the nearby historic structure, and potentially impact previously unknown cultural resources.
Biological Resources	Construction of the proposed action will provide a stable riverbank in the project area and provide rock habitat that could be used by aquatic species in the river.	Same as proposed action	Continued scouring will prevent vegetation growth along the riverbank and destroy riparian habitat along the river in the project area.

Resource	Proposed Action Alternative 2	Alternative 3	No Action Alternative 1
HTRW	No impact to HTRW resources will occur. Construction related best management practices will insure that no oils or fuels are spilled in the project area.	Same as proposed action.	Damage to the sewer line could cause spillage of its contents thus releasing biological contaminants into the White River
Air Quality	Temporary construction related increase in emissions will occur. These emissions will be within EPA requirements and will be related to construction vehicles and equipment. No impairment to the project area air quality will occur.	Same as proposed action	No impact to the air quality of the project area will occur.
Noise	Temporary construction related increase in noise would occur due to construction vehicles and equipment.	Same as proposed action	No change in current noise levels will occur.
Socioeconomic	The proposed project will provide temporary job opportunities during the construction phase of the project.	Same as proposed action	The loss of the use of the adjacent city road will limit access to this portion of the river, and loss of the sewer line will impact inhabitants until an alternate route is developed.
Recreation	The proposed project will stabilize the shoreline aquatic habitat and the longitudinal stone toe protection could provide additional fish habitat.	Same as proposed action	Continued scouring will destroy shoreline aquatic habitat thereby decreasing angler success in the area.

Resource	Proposed Action Alternative 2	Alternative 3	No Action Alternative 1
Cumulative Affects	The proposed action will have no cumulative effect when combined with any reasonably foreseeable past, present of future projects in the area.	Same as proposed action	The river bank will continue to erode causing increased turbidity and sedimentation to aquatic habitat and sewer line relocation will be required

3.0 AFFECTED ENVIRONMENT

3.1 Land Use

The project area is located in an area primarily devoted to urban activities. The primary importance of the stabilization of this stretch of land is to protect the structural integrity of the adjacent city road and protect the existing sewer line that runs parallel to the river bank.

No prime or unique farmlands (Council in Environmental Quality Memorandum of Full Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act: August 11, 1980) or wild and scenic rivers (Wild and Scenic Rivers Act, 16 U.S.C. 1271, et. seq.) occur within the area of the proposed action.

3.2 Climate

Woodruff County is hot in the summer and moderately cool in winter. In winter the average daily maximum temperature is 57.7 degrees Fahrenheit (F), and the average daily minimum temperature is 36 degrees F. In the summer the average daily minimum temperature is 66.3 degrees F and the average daily maximum is 91.3 degrees F.

The total annual precipitation is about 51 inches. It is rather uniformly distributed throughout the year, with approximately 60 percent occurring in winter and spring.

3.3 Topography, Physiography and Soils

Physiographically, Augusta is situated in Mississippi Alluvium of the Delta Ecoregion, and is located on the east side of the White River in the floodplain.

The project area contains soils of Sharkey silty clay loam and Dundee fine sandy loam. Sharkey soils in the project area are identified as Prime Farmland/Statewide Importance. Dundee fine sandy loam in this area is also identified as Prime Farmland, however due to the location of the White River this area is not protected from flooding. Therefore, these soil units would not be considered as Prime Farmland for this location.

3.4 Water Resources

The primary water resource in the project area is the White River which originates in the Ozark Mountains of Northwest Arkansas and empties into the Mississippi River in southeastern Arkansas. Other streams in the area include Cypress Brake which enters the White River from the east approximately one half mile upstream of the project area, and Taylor Bay, which enters the White River from the east approximately 2.5 miles upstream of the project area. There are no streams in the project vicinity that have a “wild or scenic” river designation.

3.5 Cultural Resources

The White River in Arkansas had supported human occupation and industry from the earliest human inhabitants in the area to modern times. This is evidenced by numerous prehistoric and historic sites that are located along the banks of the river. This project area lies in "Northeast" section of the state as described in *A State Plan for the Conservation of Archeological Resources in Arkansas* (Davis 1982). The *State Plan* outlines 25 study units for the Northeast section. These study units range from the earliest known human occupation of North America around 12,000 B.C. to settled Mississippian prehistoric occupation of the region and the subsequent European settlement. An overview of the regions prehistory and history can be found in the S*tate Plan*, as well as in *Cultural Resources Reconnaissance Study of the White River Navigation Project* (Panamerican 2001) and numerous other documents, and need not be repeated here.

The District Archeologist referenced the Arkansas Archeological Survey's archeological site database (AMASDA) and reports of surveys done within the vicinity and there was one site identified within the project area (3WO235). 3WO235 is the waste pile from the Augusta Button Factory. It was revisited during the Panamerican (2001) survey and the only artifacts recovered from the Panamerican survey were mussel shells with perforations that were referred to as "button holes." The site was also visited by the District Archeologist during a reconnaissance survey for this project, and a few shells with perforations were found on the ground surface. The area that will be impacted the most, the southern portion of the project, was surveyed by Branam in 2010 and documented in a report titled, *A Cultural Resources Survey for the Proposed Augusta Levee Stabilization Project in Augusta, Woodruff County, Arkansas*. Branam did not identify any sites during this survey.

The General Land Office maps were also consulted and there is one historic field marked just north of the project area and one marked south of the project area. No other historic features are marked within this area. There are no known historic structures within the project area, but there are three historic structures within the vicinity. The Augusta American Legion Hut lies directly adjacent to the project area and the other two structures are located downtown Augusta.

Most areas along the White River have potential for cultural resources and one site has been recorded within the project area which is mentioned above. There have been two surveys done within the project area which include the Panamerican (2001) report mentioned above and the report written by Branam (2010). These two surveys sufficiently covered the areas that will be disturbed by this project and there should be no other historic properties present.

3.6 Biological Resources

The biological resources of the White River basin are extensive as a whole. The resources specifically listed in this EA include vegetation, fish and wildlife, threatened and endangered species, and wetlands.

3.6.1 Vegetation

The original vegetation in this area was a mix of hardwood trees. Due to extensive urbanization the majority of remaining vegetation includes grasses and weeds on the top of the riverbank, with scattered woody vegetation consisting of sycamore, sweet gum, water oak, nuttall oak, cherry bark oak and willow oak.

3.6.2 Fish and Wildlife

Wildlife species present in the project area are typical of those found in the alluvial flood plain, and include white tail deer, wild turkey, coyotes and foxes. Small game animals such as rabbit, raccoon, opossum, squirrels and possibly some furbearers such as river otter, mink or beaver could occur in the vicinity of the proposed action.

Fishes of the White River include game species such as largemouth bass, crappie, bream, and catfish, and various species of rough and commercial fish such as gar, carp, and suckers. The White River is home to an assortment of fresh water mussels. A survey of freshwater mussels at the location of the proposed bank stabilization was conducted by Welch/Harris, Inc. on 24 July 2010. A total of 197 specimens were collected from the five transects sampled. No large high density concentrations of mussels were encountered in any of the transects, with most of the specimens being collected in sand/gravel substrates toward mid-river from the toe of the slope..Three species of state concern were collected during this survey: purple wartyback (*Cyclonaias tuberculata*), one specimen, hickorynut (*Obovaria olivaria*),12 specimens, and monkeyface (*Quadrula metanerva), three specimens.*

3.6.3 Threatened and Endangered Species

The U.S. Fish and Wildlife Service stated that the pink mucket (Lampsilis abrupta), scaleshell (Leptodea leptodon), and fat pocketbook (Potamilus capax)—all listed as endangered species—inhabit the lower White River downstream of Batesville. Also the rabbitsfoot (Quadrula cylindrica) is a candidate for listing under the ESA (Endangered Species Act) and is also present in the river. The 24 July 2010 survey found no threatened or endangered species in the project area.

3.6.4 Wetlands

There are no jurisdictional wetlands located in the project area. The placement of fill material (quarry run stone) below the high water mark of the White River will necessitate the procurement of a section 404 permit (CWA) and since the White River is a navigable stream, a Section 10 permit of the River and harbors Act will also be needed.

3.7 Hazardous, Toxic, and Radioactive Wastes (HTRW)

There is no known hazardous, toxic or radioactive waste located in the project area

3.8 Air Quality

The Clean Air Act of 1977, as amended requires Federal facilities to comply with all Federal, state, interstate, and local requirements regarding the control and abatement of air pollution in the same manner as any nongovernmental entity, including any requirement for permits. No particular Federal requirements are involved that are not already incorporated into Arkansas State law. According to the Arkansas Department of Environmental Quality (ADEQ), the entire state of Arkansas is in compliance with all EPA ambient air quality standards. Only ozone concentrations occasionally approach the limit of the standard. The "Conformity Rule" of the Clean Air Act of 1977, as amended (CAA) states that all Federal actions must conform to appropriate State Implementation Plans (SIPs). This rule took effect on January 31, 1994, and at present applies only to Federal actions in nonattainment areas (those not meeting the National Ambient Air Quality Standards for the criteria pollutants in the CAA). The state of Arkansas including the Augusta area is considered an "attainment area" and is therefore exempt from the "Conformity Rule" of the CAA.

3.9 Noise

Noise levels in the project area are mild to moderate. Sources of noise include local vehicular and rail traffic and barge loading and unloading activity from the nearby Bunge Corporation.

3.10 Socioeconomics

Woodruff County is located in the north east portion of the state, approximately 75 miles from Little Rock, Arkansas. The county has a total area of 594 square miles, of which, 587 square miles is land and 7 square miles is water.

As of the census of 2010, there were 7,260 people, 3,323 households, and 2,439 families residing in the county. The population density was 12.4 people per square mile. There were 3,893 housing units with2.26 persons per household. The racial makeup of the county was 69.9% White, 27.5% Black or African American 0.2% Native American, 0.2% Asian, 0.1% Pacific Island, 1.2% of the populations were Hispanic or Latino of any race. The county consists of a population that is 18 years or younger 23%, 18 years to 65 years of age 59.2% and 65 years or older 17.8%. The median age was 43.3 years.

The median income for a household in the county was $27,186 and the median income for a family was $27,824. The per capita income for the county was $18,344. Approximately 22.90% of persons were below the poverty line.

The economic makeup of Woodruff County consists of 137 nonfarm establishments. The largest employer is the retail trade sector. This sector is composed of 24 establishments that employ approximately 217 workers. This sector employs approximately 18% of the county workforce.

Augusta is the county seat and largest city in Woodruff County, Arkansas. As of the 2010 census there were 2,199 people, and 1,105 housing units.

3.11 Recreational Resources

Recreational resources in the project area consist of recreational pursuits provided by the White River such as boating and fishing opportunities. These activities will be enhanced by the proposed bank stabilization of the project area.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Land Use

The "No Action" alternative will result in the continued degradation of the shoreline. Under the "Proposed Action" and Alternative 3, land use will remain basically the same. The eroding outer bend of the White River will be protected by installation of longitudinal stone toe protection.

4.2 Water Resources

Water resources (White River) will continue to have increased turbidity levels if no action to prevent bank scouring is implemented. The "Proposed Action" and Alternative 3 will result in only temporary construction related increases in turbidity that should be localized. Water quality in the immediate area will benefit from long term decreased turbidity due to bank stabilization.

4.3 Cultural Resources

The proposed action alternative and alternative 3 will not have adverse effects on cultural resources. The no action alternative would likely have adverse effects on cultural resources. If the no action alternative is chosen then site 3WO235 will erode into the White River in the immediate future and the Augusta American Legion Hut will be threatened by further erosion, or will have to be relocated by the City of Augusta. If the proposed action alternative (or alternative 3) is chosen then longitudinal fill stone toe protection will be placed parallel to the existing bank in the area of 3WO235 in order to get the required stabilization of the bank. This will avoid impacts to the site, preserve it for future study, and stabilize the bank which will protect it from further erosion. This area was surveyed by Branam (2010) and no cultural resources were identified, therefore no impacts to cultural resources will occur in areas where there will be disturbance to the existing bank. The two historic fields on the GLO maps fall outside the project area and have likely been disturbed by the construction of Augusta and the surrounding area and will not be impacted by this project.

The American Legion Hut will not be directly impacted by the river action alternatives, and although it is in the immediate vicinity of the building, this type of project will not affect the historic integrity or "feeling" of the structure. In contrast, if the no action alternative is chosen the structure will be threatened by further erosion of the bank and the structure will eventually need to be moved to a new location to preserve it. The other two historic structures noted by the SHPO are located away from the project area and will not be affected by this project.

The finding that significant cultural resources would not be affected by this project was initially sent to the State Historic Preservation Office (SHPO) and the Quapaw Tribe of Oklahoma for comment on 23 December 2010. The SHPO responded with comments outlining these concerns. After changes were made to the project which avoided impacting 3WO235 and the Branam (2010) survey was reviewed by the District Archeologist a response letter sent to the SHPO stating that with the project changes and the new information there would be no affect to historic

properties. The SHPO responded on 25 February 2011 with the no effect finding; a copy of the response letter can be found in Appendix A. No response was received from the Quapaw tribe.

4.4 Biological Resources

Biological resources will be impacted by loss of riparian habitat if the no action (alternative 1) is implemented. The "Proposed Action" and alternative 3 will protect riparian habitat from further degradation and also prevent the loss of terrestrial habitat used by wildlife. The installation of the longitudinal stone toe protection (proposed action) will also potentially provide habitat for aquatic species in the river and provide areas for fish congregation that could benefit anglers on the river.

4.4.1 Vegetation

Vegetation will continue to be lost as long as the shoreline continues to erode. The proposed action and alternative 3 will ensure the protection of the shoreline, which will revegetate with native grasses and other vegetation, supplying wildlife with food and habitat resources.

4.4.2 Fish and Wildlife

Fish and wildlife resources will continue to suffer from loss of habitat as long as the shoreline is being degraded. The proposed action and alternative 3 will benefit wildlife by protecting their habitat.

4.4.3 Threatened and Endangered Species

The proposed action presented in this EA would not have any adverse impacts to threatened or endangered species since none were identified at the project site, and there should be only minimal impacts, if any, to the three state listed species of concern: purple wartyback (*Cyclonaias tuberculata*, hickorynut (*Obovaria olivaria*), and monkeyface (*Quadrula metanerva).* These species, totaling 16 individuals, were collected toward mid-river, away from the toe of the bank where the bank stabilization activities will occur.

4.4.4 Wetlands

There are no jurisdictional wetlands located in the project area. The placement of fill material (quarry run stone) below the high water mark of the White River will necessitate the procurement of a section 404 permit (CWA) and since the White River is a navigable stream, a section 10 permit of the River and harbors Act will also be needed.

4.5 Hazardous, Toxic, and Radioactive Waste

No action presented in this EA would have any significant impacts on any hazardous, toxic, or radioactive waste in the project area since none occurs.

4.6 Air Quality

All action alternatives evaluated in this EA may result in a short-term impact to air quality as a result of emissions from construction equipment. This impact will be limited to the construction phase of the project.

4.7 Noise

Short-term noise impacts from heavy equipment are expected during the construction phase of the project.

4.8 Socioeconomics

Under the no action alternative, it's expected that there will be very minimal disruption, if any, to the City of Augusta and Woodruff County. A breach (or relocation) of the sewer line would cause a slight disruption to the operations of the wastewater plant in the short run; however, they have a contingency plan in place that would allow them to continue operations with very little impact to customers. However, the plant would not be able to sustain operations indefinitely if there was a breach. In addition, a breach could contaminate the White River with its contents. This contamination would definitely have a negative impact on the Augusta community, as well as those downstream of Augusta. If this were to be the case, water supply sources originating from the river for municipal and industrial and agricultural uses would certainly be affected. The proposed action or alternative 3 would likely enhance fishing habitat in the area, possibly attracting more anglers to the site.

4.9 Recreation Impacts

The no-action (alternative 1) could impact fishing in the area by resulting in an increased turbidity and habitat destruction. The proposed action or alternative 3 would stabilize shoreline aquatic habitat and the longitudinal stone toe protection should provide additional fishery habitat for some species and therefore could improve angling opportunity in the area**.**

4.10 Cumulative Impacts

This section considers the cumulative effects resulting from implementation of the proposed action and any reasonably foreseeable future actions. Cumulative effects on the environment result from the incremental effect of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor, but collectively significant, actions taking place over a period of time (40 CFR 1508.7).

Due to erosive nature of the White River and the soil characteristics of the riverbank scouring and sediment deposition is and will always be a common occurrence on the river. Activities such as the proposed action have and will continue to be implemented to protect the riverbank where scouring threatens public structures and facilities. In general, these types of actions have only minor construction related impacts on the environment and quite often provide good habitat

for some aquatic species. Unlike other structures that are intended to train or control the river course, bank protection structures such as the proposed action normally only maintain the status quo of the river in regards to flow while eliminating erosion.

For this reason, the proposed action presented in this EA when considered with any additional projects on the White River is not expected to result in any cumulative impacts.

5.0 FINDINGS

In order to protect the shoreline in this portion of the White River and ultimately ensure that the Augusta city road remains accessible and the imperiled sewer line is protected, some form of bank protection is required. The results of this environmental assessment (EA) indicate that the "Proposed Action" as presented in this EA would result in minimal affects to the human environment, none of which are considered to be significant, and therefore dictate the preparation of an environmental impact statement (EIS) as required by NEPA.

6.0 COORDINATION

The following agencies were coordinated with in the plan formulation of this project:

Melvin Tobin, Deputy Project Leader, U.S. Fish and Wildlife Service, Arkansas Field Office, 1500 Museum Road, Suite 105, Conway, AR 72032

Michael P. Jansky, Regional Environmental Review Coordinator, U.S. Environmental Protection Agency, Region VI, 6EN-XP, 1445 Ross Avenue, Suite 1200, Dallas, TX 75202-2733

Frances McSwain, Director, Arkansas Historic Preservation Program, 1500 Tower Building, 323 Center Street, Little Rock, AR 72201

George Rheinhardt, Arkansas Forestry Commission, 3821 W. Roosevelt Road, Little Rock, AR 72204-6396

Teresa Marks, Director, Arkansas Dept of Environmental Quality, 5301 Northshore Drive, North Little Rock, AR 72118-5317

Scott Henderson, Director, Arkansas Game and Fish Commission, 2 Natural Resources Drive, Little Rock, AR 72205

Karen Smith, Director, Arkansas Natural Heritage Commission, 1500 Tower Building, 323 Center Street, Little Rock, AR 72201

David Friewald, Director, U.S. Geological Survey, 401 Hardin Road, Little Rock, AR 72211

Gary Jones, AR Regional Director, FEMA, Region VI, Federal Regional Center, 800 North Loop 288, Denton, TX 76210

Edward Swaim, Chief, Arkansas Soil and Water Conservation Commission, Water Resource Management Division, 101 E. Capitol, Suite 350, Little Rock, AR 72201

Richard W. Davies, Executive Director, Department of Parks and Tourism, #1 Capitol Mall, Rm 4A-900, Little Rock, AR 72201

Paul K. Halverson, Director, Department of Health, 4815 West Markham, Little Rock, AR 72205

Michael Sullivan, State Conservationist, U.S. Department of Agriculture, Natural Resources Conservation Service, 700 West Capitol Ave., Room 3416, Federal Building, Little Rock, AR 72201

Tracy L. Copeland, Arkansas State Clearinghouse, Department of Finance and Administration, 1515 West 7th Street, Room 412, P.O. Box 3278, Little Rock, AR 72203

J. Randy Young, Executive Director, Arkansas Natural Resources Commission, 101 E. Capitol Avenue, Suite 350, Little Rock, AR 72201-3827

Craig Uyeda, Arkansas Game and Fish Commission, 2 Natural Resources Drive, Little Rock, AR 72205

Steve Filipek, Assistant Chief, Fisheries Programs, Arkansas Game and Fish Commission, 2 Natural Resources Drive, Little Rock, AR 72205

Dan Flowers, Director, Arkansas Highway and Transportation Department, 10324 Interstate 30, Little Rock, AR 72211

Jeanene Peckham, NEPA Specialist, 6WQ-EM, U.S. Environmental Protection Agency, Suite 1200, Dallas, TX 75202-2733

7.0 LIST OF PREPARERS

1. Bob Singleton, Biologist, Environmental Branch, Planning and Environmental Section, U. S. Army Corps of Engineers**,** Little Rock District

2. Chris Page, District Archeologist, Environmental Branch, Planning and Environmental Section, U.S. Army Corps of Engineers, Little Rock District

Appendix A. Correspondence

December 21, 2010

Planning and Environmental Division

«fn» «ln»
«title»
«agency»
«office»
«add1»
«add2»
«city», «state» «zip»

Dear «salutation» «ln»:

The U.S. Army Corps of Engineers, Little Rock District, has initiated an "Emergency Streambank and Shoreline Erosion Protection" study on the White River at Augusta located at River Mile 198 in the Augusta city limits in Woodruff County, Arkansas. This study will be conducted under the authority of Section 14 of the 1956 Flood Control Act, as amended. The study will consists of a feasibility phase that upon completion can be used for the design and implementation phase of this project.

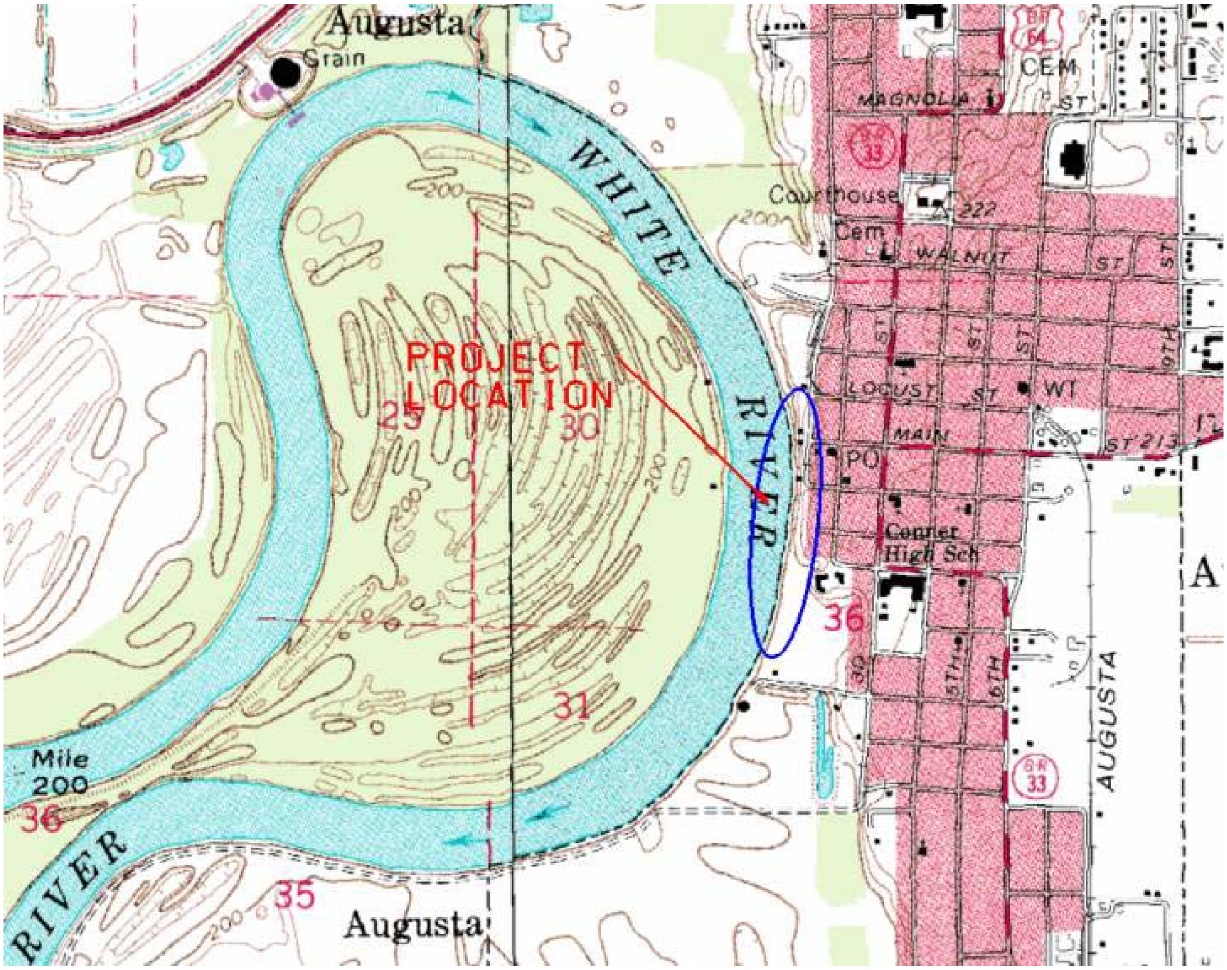
The White River along the left descending bank in Augusta, Woodruff County, Arkansas, has been actively eroding and endangering an adjacent city road and a sewer line that parallels the river bank. Figure 1 is a map of the project location.

The Corps of Engineers is requesting information and comments that would assist in the preparation of the study and accompanying environmental assessment (EA) as required by the National Environmental Policy Act of 1969 and the Corps' Engineer Regulation ER 200-2-2 "Procedures for Implementing NEPA". Please submit any information your agency may have by January 21, 2011. If comments are not received by this date, we will assume your agency has no comments at this point on the proposed action. If there are any questions or concerns, our environmental POC for this study is Mr. Bob Singleton at (501) 324-5018; email:Robert.Singleton@usace.army.mil.

Sincerely,

Dana O. Coburn
Chief, Environmental Branch

Enclosure


Augusta
Grain
WHITE
RIVER
PROJECT
LOCATION
Courthouse
Cem
MAGNOLIA
CEM
WALNUT
LOCUST
MAIN
PO
WT
Conner
High Sch
AUGUSTA
Mile
200
RIVER
Augusta

STATE OF ARKANSAS
Department of Finance and Administration

OFFICE OF INTERGOVERNMENTAL SERVICES
1515 West Seventh Street, Suite 320
Post Office Box 8031
Little Rock, Arkansas 72203-8031
Phone: (501) 682-1074
Fax: (501) 682-2256
http://www.arkansas.gov/dfa/ifgs

February 7, 2011

Ms. Dana O. Coburn
Chief, Environmental Branch
Department of the Army
Little Rock District Corps of Engineers
P.O. Box 867
Little Rock, AR 72203-0867

RE: The U.S. Army Corps of Engineers, Little Rock District, has Initiated an EMERGENCY STREAMBANK AND SHORELINE EROSION PROTECTION STUDY on the White River at August located at River Mile 198 in the August City Limits in Woodruff County, Arkansas

Dear Ms. Coburn:

The State Clearinghouse has received the above document pursuant to the Arkansas Project Notification and Review System.

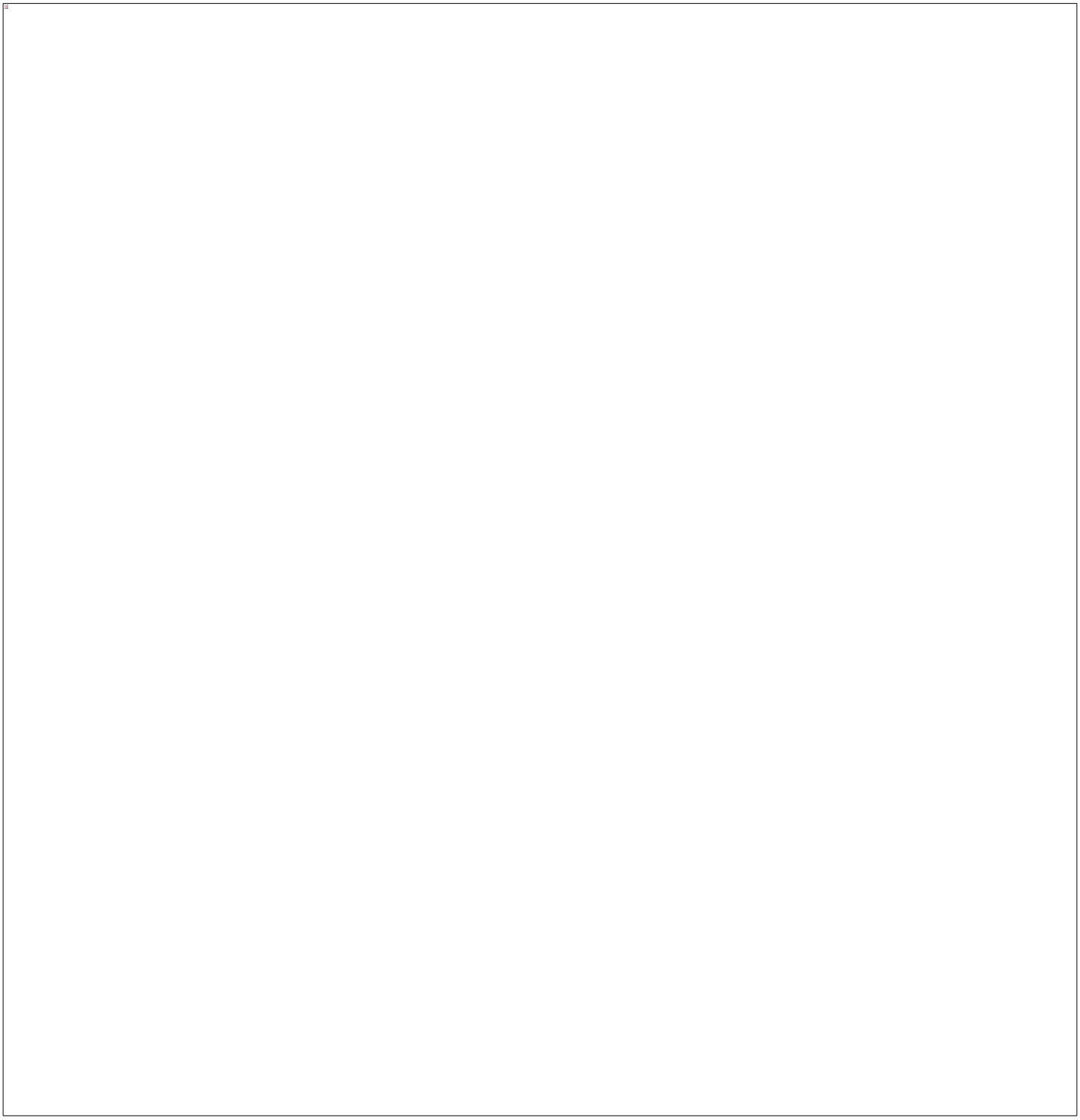
To carry out the review and comment process, this document was forwarded to members of the Arkansas Technical Review Committee. Resulting comments received from the Technical Review Committee which represents the position of the State of Arkansas are attached.

The State Clearinghouse wishes to thank you for your cooperation with the Arkansas Project Notification and Review System.

Sincerely,

Tracy L. Copeland, Manager
State Clearinghouse

TLC/nd
Enclosure
CC: J. Randy Young



United States Department of Agriculture

NRCS

Natural Resources Conservation Service
Room 3416 Federal Building
700 West Capitol Avenue
Little Rock, Arkansas 72201-3315

JAN 14 2011

Dana O. Coburn
Chief, Environmental Branch
Little Rock District
Corp of Engineers
P.O. Box 867
Little Rock, Arkansas 72201

Dear Ms. Coburn

This letter is in response to your request for information related to Prime Farmland and Farmland of Statewide Importance for the proposed Emergency Stream bank and Shoreline Protection study in Augusta, Woodruff, County, Arkansas. These areas are not considered Prime Farmland or Farmland of Statewide Importance.

Should you have any questions or need additional information, please call me at (501) 301-3172 or email at nelson.rolong@ar.usda.gov.

Sincerely,

Nelson A Rolong

NELSON A. ROLONG Ph. D.
Assistant State Soil Scientist

Enclosure

cc:
Luis Hernandez, Soil Survey Region 16 Leader/State Soil Scientist, NRCS, Little Rock, AR

Helping People Help the Land

U.S. Department of Homeland Security
FEMA Region 6
800 North Loop 288
Denton, TX 76209-3698

FEMA

January 5, 2011

Mr. Bob Singleton
Department of the Army
Little Rock District Corps of Engineers
PO Box 867
Little Rock, AR 72203-0867

RE: Emergency Streambank & Shoreline Erosion Protection Study
White River, Augusta, AR

Dear Mr. Singleton:

This office is in receipt of the captioned project submitted to this office for review.

In reviewing the current effective Flood Insurance Rate Maps for Augusta, Arkansas, we find that the east side of the project is located in a Zone A, a high-risk flood zone. As such, being a Federal agency, all actions must meet Executive Order 11988.

The community of Augusta is participating in the National Flood Insurance Program (NFIP) and this project should be reviewed by and coordinated with the appropriate Floodplain Administrator in the community to ensure compliance with their Flood Damage Prevention Ordinance. Please contact Mayor Rocky Tidwell, (870) 347-7444, for any floodplain management requirements.

If you have any other questions, please feel free to contact me at (940) 898-5523 or via email at Diana.b.herrera@dhs.gov.

Sincerely,

Diana B. Herrera, CFM
Natural Hazards
Program Specialist

www.fema.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

January 6, 2011

Bob Singleton
Little Rock District, Corps of Engineers
Planning and Environmental Division
P.O. Box 867
Little Rock, Arkansas 72203-0867

Subject: Environmental Assessment for Emergency Streambank and Shoreline Erosion Protection on the White River at Augusta, Arkansas

Dear Mr. Singleton:

The Environmental Protection Agency (EPA) Region 6 has received your correspondence, dated December 21, 2010, regarding scoping for the Environmental Assessment (EA) for Emergency Streambank and Shoreline Erosion Protection on the White River at Augusta, Arkansas. In accordance with the National Environmental Policy Act, and under Section 309 of the Clean Air Act, our agency has identified areas of concern that should be addressed in the EA:

- federally listed species within 2,500 meters of the project area
- places on the National Register of Historic Places within 100 meters of the project area
- places on the National Register of Historic Places within 1,000 meters of the project area
- EPA regulated facilities within 1,000 meters of the project area
- wetlands may be within or near the project area

Please note that the proposed project may be subject to other federal, state, and local regulations. Please see attached documentation. Thank you for your coordination and don't hesitate to contact John MacFarlane, of my staff, at 214-665-7491 or macfarlane.john@epa.gov should you have any questions or concerns regarding this letter.

Sincerely,

Rhonda Smith
Chief, Office of Planning and Coordination

Enclosure

The Department of
Arkansas Heritage

Mike Beebe
Governor

Cathie Matthews
Director

Arkansas Arts Council

Arkansas Natural Heritage Commission

Delta Cultural Center

Historic Arkansas Museum

Mosaic Templars Cultural Center

Old State House Museum

Arkansas Historic Preservation Program

1500 Tower Building
323 Center Street
Little Rock, AR 72201
(501) 324-9880
fax: (501) 324-9184
tdd: (501) 324-9811
e-mail:
info@arkansaspreservation.org
web:
www.arkansaspreservation.com

An Equal Opportunity Employer

January 13, 2011

Mr. Robert Singleton
Little Rock District, Corps of Engineers
Planning & Environmental Division
Post Office Box 867
Little Rock, Arkansas 72203-0867

RE: Woodruff County - Augusta
Section 106 Review - COE
Emergency Streambank & Shoreline Protection
AHPP Tracking No: 74965

Dear Mr. Singleton:

This letter is written in response to your inquiry regarding properties of architectural, historical, or archeological significance in the area of the referenced project. My staff has reviewed the documentation regarding the above-referenced undertaking, and our records show that one archeological site (3WO235) and three historic structures (WO0041 - Augusta American Legion Hut, WO0065 - Building at 126 S. First Street and WO0066 - Building at 128 S. First Street) are located in close proximity to the subject project and may be affected by the proposed work. 3WO235 is eligible for inclusion in the National Register of Historic Places and WO0041, WO0065 and WO0066 are eligible as contributing elements of the Augusta Commercial Historic District.

We recommend that a cultural resources survey be conducted to determine the current status of these properties, and whether additional unrecorded sites are present. A report of that work that meets current guidelines for archeological fieldwork and report writing in Arkansas should be submitted for review prior to project implementation.

Thank you for the opportunity to comment on this undertaking. If you have any questions, please contact George McCluskey of my staff at (501) 324-9880.

Sincerely,

Frances McSwain

Frances McSwain
Deputy State Historic Preservation Officer

cc: Mr. Tracy L. Copeland, State Clearinghouse
Dr. Ann M. Early, Arkansas Archeological Survey
Dr. Andrea A. Hunter, Osage Nation
Ms. Jean Ann Lambert, Quapaw Tribe of Oklahoma

United States Department of the Interior

FISH AND WILDLIFE SERVICE
110 S. Amity Road, Suite 300
Conway, Arkansas 72032
Tel.: 501/513-4470 Fax: 501/513-4480

IN REPLY REFER TO:

January 21, 2011

Colonel Glen A. Masset
c/o Dana O. Coburn, Chief Environmental Branch
U.S. Army Corps of Engineers
Post Office Box 867
Little Rock, AR 72203-0867

Dear Colonel Masset:

The U.S. Fish and Wildlife Service (Service) received a letter dated December 21, 2010, from you staff regarding an "Emergency Streambank and Shoreline Protection" study for a proposed stabilization project on the right ascending bank of the White River at River Mile 198 near Augusta, Arkansas. Your letter requests a review by our agency to assist the U.S. Army Corps of Engineers – Little Rock District in preparation of the study and accompanying environmental assessment (EA). Our comments are submitted in accordance with the Endangered Species Act (87stat. 884,as amended; 16 U.S.C.1531 et seq.; ESA) and Fish and Wildlife Coordination Act (48Stat. 401,as amended; U.S.C.661et seq.).

A high density mussel bed occurs from approximately White River Mile 197.5 to 198. Currently we do not have sufficient up to date information as to the species composition of this mussel bed. The federally endangered pink mucket (*Lampsilis abrupta*), Scaleshell (*Leptodea leptodon*), and fat pocketbook (*Potamilus capax*) and numerous state mussel species of greatest conservation need occur in the White River and could potentially occur within this area and/or the area affected. The Service recommends the following actions be taken and information gathered prior to making a determination of effects associated with the aforementioned action:

1. Provide detailed design plans for the stabilization project are needed to identify and assess the affected area.
2. Conduct a presence/absence mussel survey by a qualified malacologist extending 100 feet upstream to 300 feet downstream of the proposed project footprint and extending from the right bank to center channel.
3. Submit a final report of the presence/absence survey to our office and the Arkansas Game and Fish Commission (AGFC) malacologist for approval.
4. If a federally threatened or endangered species is found within the survey area, further coordination and consultation may be required between the Service, AGFC and the Corps to evaluate and identify appropriate avoidance and/or minimization measures. This may include, but is not necessarily limited to, translocation of mussels.

Please coordinate with AGFC's malacologist for additional comments and recommendations regarding state species of greatest conservation need.

We appreciate your cooperation and interest in protecting endangered species. If you have any questions or additional comments, please contact me at (501) 512-4489.

Sincerely,

Lindsey Lewis
Federal Projects Coordinator

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Appendix B. Nationwide Permit #13 Bank Stabilization

Nationwide Permit No. 13

Bank Stabilization. Bank stabilization activities necessary for erosion prevention, provided the activity meets all of the following criteria:

(a) No material is placed in excess of the minimum needed for erosion protection;

(b) The activity is no more than 500 feet in length along the bank, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in minimal adverse effects;

(c) The activity will not exceed an average of one cubic yard per running foot placed along the bank below the plane of the ordinary high water mark or the high tide line, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in minimal adverse effects;

(d) The activity does not involve discharges of dredged or fill material into special aquatic sites, unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in minimal adverse effects;

(e) No material is of a type, or is placed in any location, or in any manner, that will impair surface water flow into or out of any waters of the United States;

(f) No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored trees and treetops may be used in low energy areas); and,

(g) The activity is not a stream channelization activity.

This NWP also authorizes temporary structures, fills, and work necessary to construct the bank stabilization activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Invasive plant species shall not be used for bioengineering or vegetative bank stabilization.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if the bank stabilization activity: (1) involves discharges into special aquatic sites; or (2) is in excess of 500 feet in length; or (3) will involve the discharge of greater than an average of one cubic yard per running foot along the bank below the plane of the ordinary high water mark or the high tide line. (See general condition 31.) (Sections 10 and 404)

Nationwide Permit General Conditions:

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR §§ 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.
(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.
(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.
(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.
(f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.noaa.gov/fisheries.html respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.
(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to

demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.
(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.
(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.
(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.
(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:
(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.
(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.
(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.
(2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.
(3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).
(4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.
(5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.
(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.
(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.
(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.
(g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.
(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:
"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____
(Transferee)

_____
(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:
(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
(c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).
(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:
(1) Name, address and telephone numbers of the prospective permittee;
(2) Location of the proposed project;
(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);
(4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;
(5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.
(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and
(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.
(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.
(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.
(2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from

the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.
(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.
(4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

District Engineer's Decision:

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (a) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

Further Information:

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

Appendix C. 30 Day Public Review Period Comments

Pursuant to 40 CFR 1501.4(e)(2) and ER 200-2-2 Procedures for Implementing NEPA the draft EA and draft FONSI were circulated to interested agencies and the public for a minimum 15 calendar day public review period. This period began August 10, 2012 and ended on August 25, 2012. Comments received from the public will be presented in this appendix to the Final EA.

The following agencies were notified of the availability of the draft EA and FONSI for commenting:

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Loretta Sutton
U.S. Department of the Interior
Office of Environmental Policy and Compliance (MS 2342)
Washington, DC 20240

Appendix D. Finding of No Significant Impact (FONSI)

FINDING OF NO SIGNIFICANT IMPACT

NAME OF PROPOSED ACTION: Section 14 Augusta- Bank Stabilization, Woodruff County, Arkansas

PURPOSE AND NEED FOR THE PROPOSED ACTION. The left descending bank of the White River adjacent to the City of Augusta is being actively eroded, placing an existing sewer line and an adjacent city road in danger of compromise. The area of greatest concern is an approximate distance of 2000 feet from an existing boat ramp downstream parallel to the city road and extending downstream parallel to the sewer line. Continued erosion will undermine the structural integrity of the road and the sewer line, which could possibly result in disruption of sewer service for a portion of the city, limit river access from the adjacent city road, and imperil an existing historical site located within the project area.

ALTERNATIVES. The following two alternatives were evaluated in detail in the attached EA:

Proposed Action: The proposed action consists of installation of 1950 feet of longitudinal stone toe protection to stabilize the actively eroding portion of the left descending stream bank. This will allow sediment deposition behind the LSTP during high water events which will further reduce erosion from occurring along the toe of the river. The existing river bank slope will be maintained throughout the total length of the project area. The addition of the 1950 feet of LSTP will also provide additional fish habitat.

No Action: Acceptance of a "no-action" plan would result in the continued erosion of the left descending bank of the White River which will result in the loss of the sewer line and the local city road, as well as imperiling the historical site located within the project area.

Other measures such as addition of bendway weirs to complement the proposed action, as well as bank sloping and armoring, were considered during plan formulation to address the erosion problem in the project area. Due to the increased costs associated with the additional material and implementation, these alternatives were not considered feasible.

ANTICIPATED ENVIRONMENTAL IMPACTS:

Consideration of the effects disclosed in the EA, and a finding that they are not significant, is necessary in order to prepare a FONSI. This determination of significance is required by 40 CFR

1508.13. Additionally, 40 CFR 1508.27 defines significance at it relates to consideration of environmental effects of a direct, indirect or cumulative nature.

Criteria that must be considered in making this finding are addressed below, in terms of both context and intensity. The significance of both short and long term effects must be viewed in several contexts: society as a whole (human, national); the affected region; the affected interests; and the locality. The context for this determination is primarily local, as shown in Figure 1 of the EA. The context for this action is not highly significant geographically, nor is it controversial in any significant way. Consideration of intensity refers to the magnitude and intensity of impact, where impacts may be both beneficial and adverse. Within this context, the magnitude and intensity of impacts resulting from this decision are not significant. The determination for each impact topic is listed below.

1. **The degree to which the action results in both beneficial and adverse effects. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.** The EA indicates that there will be beneficial effects such as prevention of the adjacent city road failure and subsequent damage to the historical building located there, and prevention of the loss to the sewer line and associated loss of sewer services that is highly probable in the future if the No Action alternative is implemented, as well as adverse construction related effects from implementation of proposed action, but these will be minor in intensity and construction related only. Section 404 and Section 10 permits will be secured, and guidelines for minimization of adverse construction related impacts contained therein will be followed.

2. **The degree to which the action affects public health or safety.** As previously stated the Proposed Action will protect public safety by preventing possible flood damages and loss of a city road and sewer line. No adverse effects to public health or safety will result from the Proposed Action. Under existing conditions, no hazardous materials are identified on the site. Implementing the Proposed Action would not create hazardous conditions affecting public health or safety.

3. **The degree to which the action affects unique characteristics of the potentially affected area, such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.** There is a historic structure adjacent to the proposed action but its historic integrity will not be affected by this undertaking.

4. **The degree to which effects on the quality of the human environment are likely to be highly controversial.** The project will benefit the public therefore the Little Rock District Corps of Engineers does not regard this activity as controversial. Comments received during the 15-day public review period confirm this position.

5. **The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.** There is no uncertainty involving the

impacts of this action. Bank stabilization will ensure that the city road and sewer line are protected from hydrologic forces that currently are threatening the stability of the river bank.

6. **The degree to which the action may establish a precedent for future actions with significant impacts.** The bank stabilization will not establish any precedent for future action that has significant impacts. Past, present and future stabilization projects in the vicinity of this portion of the river were considered in the impact analysis of the EA.

7. **Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.** Cumulative effects analyses for the physical and biological resources that would potentially be affected are presented in the EA. Cumulative effects on these resources focus on disturbed soils, vegetation loss, habitat loss, or other impacts relating to construction activities involved in the Proposed Action. The Proposed Action would not result in any cumulative impacts in regard to any reasonably foreseeable action in the project area.

8. **The degree to which the action may adversely affect items listed or eligible for listing in the National Register of Historic Places, or other significant scientific, cultural or historic resources.** The proposed action alternative will have no adverse effects on cultural resources. There is one known site within the project area, but impacts to that site will be avoided by placing fill on the existing bank in that area. The project area was surveyed for cultural resources in 2010 and no historic properties were documented. This information was submitted to the State Historic Preservation Office of Arkansas, as well as the Quapaw Tribe of Oklahoma, for review. The State Historic Preservation Office responded that the proposed action would not have an adverse effect on any historic properties. No response was received from the Quapaw Tribe of Oklahoma.

9. **The degree to which the action may adversely affect an endangered or threatened species or its critical habitat.** Coordination with the U.S. Fish and Wildlife Service indicates that there are no federally listed threatened or endangered species within the immediate project area.

10. **Whether the action threatens a violation of Federal, State or local law or requirements imposed for the protection of the environment.** No such violations will occur. Permits from other jurisdictional agencies will be obtained prior to any construction activities. Continued coordination with regulatory agencies will be ongoing to ensure compliance with all federal, state, regional, and local regulations and guidelines.

CONCLUSIONS:

The impacts identified in the prepared EA have been thoroughly discussed and assessed. No impacts identified in the EA would cause any significant adverse effects to the human environment. Therefore, due to the analysis presented in the EA and comments received from a 15-day public review period that began on August 10, 2012 and ended on August 25, 2012, it is my decision that the preparation of an Environmental Impact Statement (EIS) as required by the National Environmental Policy Act (NEPA) is unwarranted and a "Finding of No Significant Impact" (FONSI) is appropriate. The signing of this document indicates the Corps final decision of the proposed action as it relates to NEPA. The EA and FONSI will be held on file in the Environmental Branch, Planning and Environmental Section for future reference. Consultation with regulatory agencies will be ongoing to ensure compliance with all federal, state, regional, and local regulations and guidelines.

_____ _____

Date

Glen A. Masset
Colonel, US Army
District Engineer

Appendix B – Real Estate

White River, Augusta, Arkansas,

Woodruff County, Arkansas

REAL ESTATE PLAN
SECTION 14
CITY OF AUGUSTA, ARKANSAS
STREAMBANK STABILIZATION PROJECT
WOODRUFF COUNTY, ARKANSAS

3 March 2011

PREPARED BY
DIANE MCKAY
EAL ESTATE DIVISION
U.S. ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT

REAL ESTATE PLAN
SECTION 14
CITY OF AUGUSTA, ARKANSAS
STREAMBANK STABILIZATION PROJECT
WOODRUFF COUNTY, ARKANSAS

Table of Contents

Attachments:

Exhibit "A" Project Location
Exhibit "B" Estates
Exhibit "C" Assessment of Non-Federal Sponsor

Prepared By: Diane McKay
Real Estate Division

REAL ESTATE PLAN
SECTION 14
CITY OF AUGUSTA, ARKANSAS
STREAMBANK STABILIZATION PROJECT
WOODRUFF COUNTY, ARKANSAS

[1] Purpose

The purpose of this Real Estate Plan (REP) is to outline the real estate acquisition requirements necessary for the completion of the Section 14, Augusta, Arkansas Bank Stabilization Project.

The authority for the study is Section 14 of the Flood Control Act of 1946, as amended (33 USC 701r). Work under this authority serves to prevent flood or erosion damage to endangered highways and other public and private non-profit public facilities including municipal water supply systems and sewage disposal or treatment plants by the construction or repair of streambank shoreline protection works.

[2] Description of Lands, Easements and Rights-of-Way (LER's)

The proposed project will encumber acreage on the left descending bank of the White River, comprised of approximately nine (9) ownerships identified by the Non-Federal Sponsor . The real estate for the proposed channel improvement project is zoned Central Business District (C-1), Single Family Residential (R-1), and Industrial (I). The channel improvement or bank stabilization project will encumber a total aggregate area of approximately 3.18 acres. The bank stabilization structure area will encumber approximately 2.20 acres. The two (2) staging areas will encumber areas of approximately 0.26 acre and 0.34 acre for a total of 0.60 acre. The two (2) road access areas will encumber areas of approximately 0.17 acre and 0.21 acre for a total of 0.38 acre. The staging and the road access areas contain an aggregate of 0.98 acre.

[3] LER owned by Non-federal Sponsors

The City of Augusta, Arkansas, as the non-federal sponsor, will acquire the necessary real estate interest for this streambank stabilization project.

[4] Non-standard estates

There are no non-standard estates for this project. A channel improvement easement and a temporary work area easement are the estates to be acquired for the proposed project. (See Exhibit B). Road access as shown on Exhibit "A" is owned by the Non-Federal Sponsor.

[5] Any existing federal projects

There are no other U.S. Army Corps of Engineers projects directly involved with this proposed project.

[6] Any federally owned land

There is no federally owned property involved with this proposed project.

[7] LER that lies below the ordinary high water mark of the White River.

Navigation Servitude allows acquisition of shore lands extending to the ordinary high-water mark thereof and may be exercised under statutory rights and powers without obligation for compensation to riparian landowners. The toe of the bank stabilization project lies below the ordinary high-water mark. Acquisition of real estate is not necessary on this portion of the project.

[8] Maps

Maps depicting the location of the proposed project are shown in Exhibit A. There are no known or potential Hazardous, Toxic, and Radioactive Waste (HTRW) lands involved for this proposed project. Existing utilities or facilities will not need to be relocated due to the construction activity at this project site.

[9] Any possible flooding

Induced flooding is not anticipated by the construction or operation and maintenance of the project.

[10] Cost estimate

The following baseline estimate is based upon a real estate cost estimate of $50,500.00 dated 15 March 2011 prepared by Ronald Bridges, Little Rock District, U.S. Army Corps of Engineers. The indicated baseline real estate cost estimate is $75,000.00 for the Section 14, Augusta, Arkansas Emergency Bank Stabilization Restoration Site Plan project.

BASELINE COST ESTIMATE FOR REAL ESTATE
SECTION 14
AUGUSTA, ARKANSAS BANK STABILIZATION PROJECT

01	Lands & Damages		
01.23	Construction Contract Documents		
01.23.03	Real Estate Analysis Documents		
01.23.03.01	Real Estate Planning Documents		
	Planning by Local Sponsor	$1,200	20% = $240
	Corps of Engineers Real Estate Plan	$1,600	20% = $320
	Review of Local Sponsor	$800	20% = $160
01.23.03.02	Real Estate Acquisition Documents		
	Acquisitions by Local Sponsor	$7,000	20% = $1,400
	Review of Local Sponsor	$2,000	20% = $400
01.23.03.03	Real Estate Condemnation Documents		
	Condemnations by Local Sponsor	0	0
	Review of Local Sponsor	0	0
01.23.03.05	Real Estate Appraisal Documents		
	Appraisals by Local Sponsor	$4,000	20% = $800
	Review of Local Sponsor	$1,500	20% = $300
01.23.03.06	Real Estate PL 91-646 Asst. Documents		
	PL 91-646 Asst. by Local Sponsor	0	0
	Review of Local Sponsor	0	0
01.23.03.15	Real Estate Payment Documents		
	Payments by Local Sponsor (Land)	$50,500.00	
	Payments by Local Sponsor (Damages)	0	0
	Payments by Local Sponsor (PL 91-646 Asst.)	0	0
	Review of Local Sponsor	0	0
01.23.03.17	Real Estate LERRD Crediting Documents		
	Preparation by Local Sponsor	$1600	20% = $320
	Review of Local Sponsor	$800	20% = $160
	TOTAL ADMIN & PAYMENTS	$71,000	
	TOTAL CONTINGENCY		$4,100
	ESTIMATED TOTAL		**Rounded $75,000**

[11] Relocation Benefit

Not applicable to the project.

[12] Mineral activity

There is no mineral activity in the immediate vicinity of the proposed project.

[13] Assessment of non-federal sponsors

The City of Augusta, Arkansas has the capability to acquire the necessary real estate interests for this proposed project. (See Exhibit C).

[14] Application of zoning ordinances

No zoning ordinances are proposed in lieu of or to facilitate acquisition in connection with this project..

[15] Land Acquisition Milestones

Barring condemnation action, the necessary real estate interest for the proposed bank stabilization can be acquired within a 180-day period.

[16] Facility or utility relocations

There are no anticipated facilities or utility relocations associated with this project.

[17] Known contaminants

No visible contaminants were noted on or adjacent to the LER's required for the proposed project per the site visit conducted 31 August 2010. .

[18] Support or opposition to the project

This proposed emergency stream bank stabilization project has the full support of officials in the City of Augusta. No opposition has been voiced from any quarter.

[19] Statement that non-federal sponsor has been notified in writing about the risks associated with acquiring land.

The non-federal sponsor was notified on March 3, 2011, via e-mail about risks with acquiring the land needed for the project.

[20] Other real estate issues

There are no other real estate issues that need to be addressed relevant to this project.

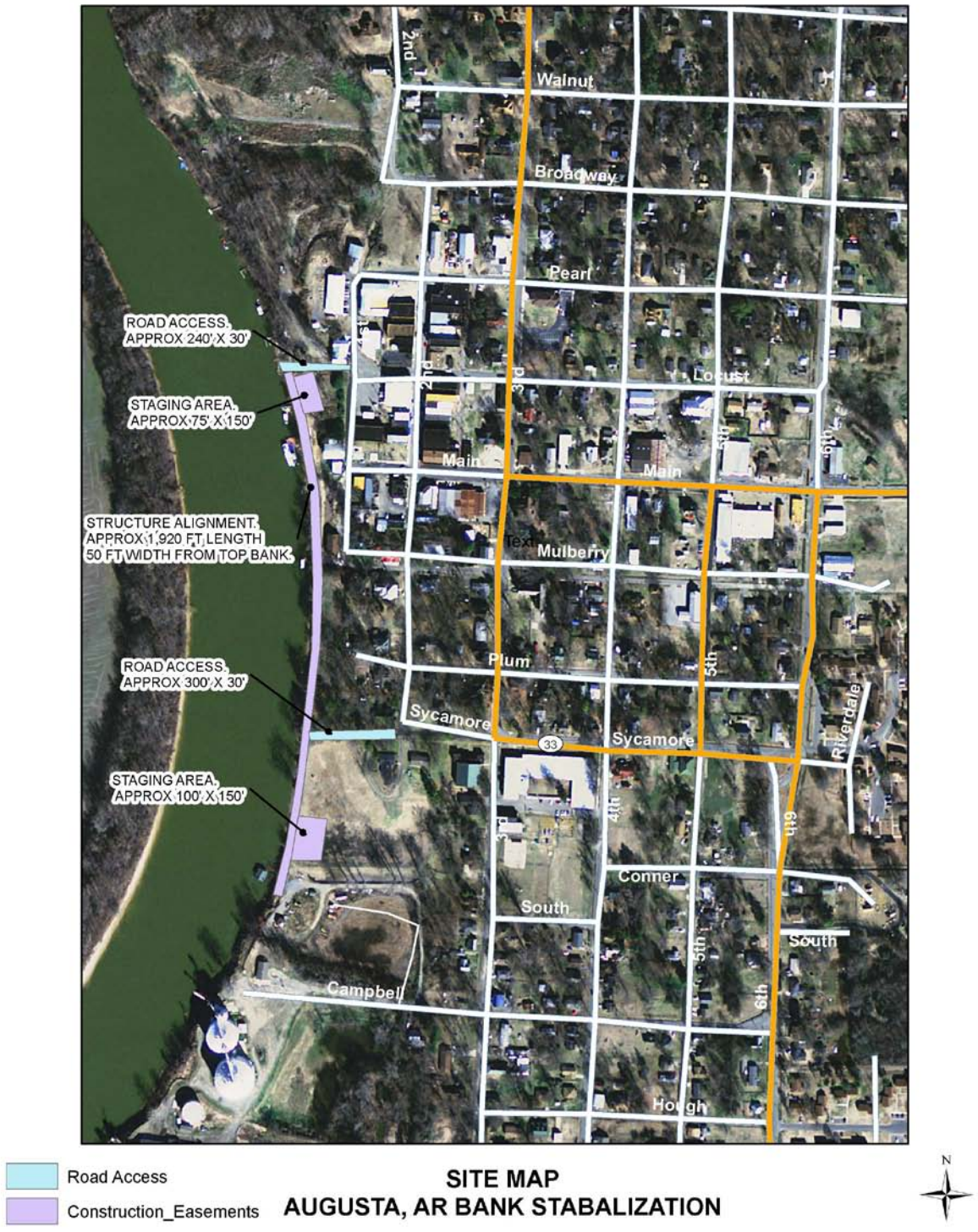

EXHIBIT “A”

Estates

Channel Improvement Easement

A perpetual and assignable right and easement to construct, operate, and maintain channel improvement works on, over and across (the land described in Schedule A) (Tracts Nos. _____, _____ and _____) for the purposes as authorized by the Act of Congress approved _____, including the right to clear, cut, fell, remove and dispose of any and all timber, trees, underbrush, buildings, improvements and/or other obstructions therefrom; to excavate, dredge, cut away, and remove any or all of said land and to place thereon dredge or spoil material; and for such other purposes as may be required in connection with said work of improvement; reserving, however, to the owners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

Temporary Work Area Easement

A temporary easement and right-of-way in, on, over and across (the land described in Schedule A) (Tracts Nos. _____, _____, and _____), for a period not to exceed _____, beginning with date possession of the land is granted to the United States, for use by the United States, its representatives, agents, and contractors as a (borrow area) (work area), including the right to borrow and/or deposit fill, spoil and waste material thereon) (move, store and remove equipment and supplies, and erect and remove temporary structures on the land and to perform any other work necessary and incident to the construction of the _____ Project, together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions, and other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

EXHIBIT "B"

SECTION 14
CITY OF AUGUSTA, ARKANSAS
STREAMBANK STABILIZATION PROJECT
(CITY OF AUGUSTA, ARKANSAS – NON-FEDERAL SPONSOR)

ASSESSMENT OF NON-FEDERAL SPONSOR'S
REAL ESTATE ACQUISITION CAPABILITY

1. LEGAL AUTHORITY:

(a) Does the sponsor have legal authority to acquire and hold title to real property for project purposes? Yes

(b) Does the sponsor have the power of eminent domain for this project? Yes

(c) Does the sponsor have "quick-take" authority for this project? Yes

(d) Are any of the lands/interests in land required for the project located outside of the sponsor's political boundary? No

(e) Any of the lands/interests in land required for the project owned by an entity whose property the sponsor cannot condemn? No

2. HUMAN RESOURCE REQUIREMENTS:

(a) Will the sponsor's in-house staff require training to become familiar with the real estate requirements of Federal projects including P.L. 91-646, as amended? No

(b) If the answer to 2.a is "yes", has a reasonable plan been developed to provide such training? _____

(c) Dose the sponsor's in-house staff have sufficient real estate acquisition experience to meet its responsibilities for the project? Yes

(d) Is the sponsor's projected in-house staffing level sufficient considering its other workload, if any, and the project schedule? Yes

(e) Can the sponsor obtain contractor support, if required, in a timely fashion? Yes

(f) Will the sponsor likely request USACE assistance in acquiring real estate? No
(If "yes", provide description).

3. OTHER PROJECT VARIABLES:

(a) Will the sponsor's staff be located within reasonable proximity to the project site? Yes

(b) Has the sponsor approved the project/real estate schedule milestones? Yes

4. OVERALL ASSESSMENT:

(a) Has the sponsor performed satisfactorily on other USACE projects? N/A

(b) With regard to this project, the sponsor is anticipated to be: X Highly capable _____Fully capable _____Moderately capable _____Marginally capable _____Insufficiently capable (If sponsor is believed to be insufficiently capable, provide explanation).

5. COORDINATION:

(a) Has this assessment been coordinated with the sponsor? Yes

(b) Does the sponsor concur with this assessment? Yes (If "No", provide explanation).

Prepared by:

Ralph H. Allen (Signature)
RALPH H. ALLEN
Attorney, Office of Counsel 17 March 2011

Reviewed and Approved by:

(Signature)
DONALD L. BALCH
Chief, Real Estate Division

Exhibit C

EXHIBIT "C"

Appendix C – Cost Engineering

White River, Augusta, Arkansas,

Woodruff County, Arkansas

COST ENGINEERING APPENDIX

Augusta Bank Stabilization, Woodruff County, Arkansas (P2 Number 101508)
Feasibility Report

TABLE OF CONTENTS

APPENDIX C5.0 - Section 14 – Feasibility Report

Emergency Streambank Protection for the City of Augusta's Sanitary Sewer Line, Woodruff County, Arkansas

C5.0-1 - GENERAL - The Cost Engineering Section of the Little Rock District Corps of Engineers prepared preliminary cost estimates and the baseline cost estimate for the protection of the sanitary sewer main for the City of Augusta, White River, Arkansas. The tentatively selected alternative contained within this Appendix is for Alternative 2, Longitudinal Fill Stone Toe Protection with Grade "B" stone along 1,950 feet of the White River's East bank.

The cost estimates for the alternative plans presented in this feasibility study were prepared in accordance with Engineering Technical Letter (ETL) 1110-2-573, "Engineering and Design, CONSTRUCTION COST ESTIMATING GUIDE FOR CIVIL WORKS", dated 30 September 2008. The cost account numbers in the estimate are in accordance with those prescribed in the previously cited ETL. The price level base for riprap materials was based upon March 2012 quote. The baseline estimate provides for all pertinent elements for a complete project ready for operation.

C5.0-2 PROJECT SCOPE AND CONSIDERATIONS:

The major work item is construction of a riprap bank stabilization structure. Minimal additional work (clearing, grubbing and excavation) to prepare the bank to accept the riprap is included in the estimate.

The costs for the baseline estimate are totally based upon quantities provided by the civil designer in the General Engineering Section for the bank stabilization work riprap structures. Typical cross sections and quantity calculations by "In-roads" were provided based upon surveys completed in April 2012. No drawings or structure design were provided for estimating purposes.

The estimates are presented in MCACES MII for Windows, v. 4.1 Build 4, using labor rates developed from the 2012 Means Labor Rates publication, equipment 2009 database for Region III containing Arkansas using fuel prices obtained from the www.EIA.gov website, and the MII English Cost Book 2010 databases.

Design engineers feel the average end area method calculations from which quantities were generated are of sufficient detail for a feasibility study level of design and that confidence can be placed on the quantities developed when the assigned contingencies are considered.

C5.0-3 DISCUSSION OF COSTS FOR BASELINE ESTIMATES BY ACCOUNT NUMBERS –

The selected plan's cost will be briefly discussed below by feature. The features discussed will include: 01 - Lands and Damages; 16 - Bank Stabilization; 30 - Planning, Engineering and Design; and 31 - Construction Management. This study and project are cost shared with the City of Augusta, Arkansas.

Feature 01 - Lands and Damages -

Lands and Damages cost represents all Real Estate costs associated with the construction of the back stabilization project including land associated with disposal of clearing debris and excavated material. Lands required include construction ingress and egress rights of way, easement land to construct the project and a temporary easement on the land on which the equipment is positioned while constructing the project.

Real Estate costs are further documented in the revised Real Estate Plan.

Feature 16 – Bank Stabilization -

Costs in this feature represent those costs associated with the construction of new Grade "B" stone (R1200) riprap keys into the bank and the longitudinal fill stone toe protection to provide a new bank stabilization structure necessary for this Project.

Feature 30 - Planning, Engineering and Design (PED) -

Costs for this account represent a compilation of costs from the individual elements of the Little Rock District, which have and will work on providing a complete, biddable design package. Technical indirect and district overhead costs for the respective elements are also a part of these costs. The PED amount was determined by taking 15 percent of the construction contract cost.

Feature 31 - Construction Management -

These construction management (CM) costs represent total costs for the Construction Branch (District and Field Offices) and project management. These costs include the Technical Indirect and District Overhead markups for these respective organizations. The CM amount was furnished by Construction Branch personnel at 10 percent of the construction contract cost.

C5.0-4 DISCUSSION OF CONTINGENCIES

The contingency assigned to the cost estimate was based upon the results of an abbreviated Cost Risk Analysis Study on May 16 and 23, 2012. The study included all of

the PDT members, and used the set of Excel spreadsheets provided by the Cost Engineering Center of Expertise of Walla Walla District.

01 - Lands and Damages - Real Estate (RE) determined the land values using local knowledge of structure/land costs and by completing a visual inspection of each property. RE recommended using a 20% contingency on structure/land values that were assigned. Property appraisals will be further detailed prior to implementation for a final comparison of options and recommendation. Relocation assistance is an allocated amount based on the size of the family being affected. Real Estate has reliable historical information on administrative costs used for land acquisitions.

Based on Information from the Center of Expertise, contingency for Lands and Damages was not evaluated in the Cost Risk Analysis Study.

Feature 16 – Bank Stabilization - The results of the abbreviated cost risk analysis study for Alternative 2 was a 24% weighted construction contingency. The team thought the risks lay in the lack of a complete engineering survey and the potential of additional scour damage occurring before the project can be constructed.

Feature 30 - Planning, Engineering, and Design (PED). The results of the abbreviated cost risk analysis study for Alternative 2 was a 2% PED contingency. The civil designer felt that the project was simple in nature and cost growth for this work would be small.

Feature 31 – Construction Management (CM). The results of the abbreviated cost risk analysis study for Alternative 3 was an 8% CM contingency. The construction management team member felt the cost risk for his effort would be marginal based upon the limited scope of the proposed project.

C5.0-5 - ESCALATION

Escalation is based on the results obtained from the Total Project Cost Summary (TPCS). Tables in the TPCS reflect the indices in the March 31, 2012 EM1110-2-1304 CWCCIS based upon a Gantt Chart schedule prepared on May 24, 2012.

****** TOTAL PROJECT COST SUMMARY ******

PROJECT: **Alternative 2. Full Length LFSTP Bank Stabilization, White River, Augusta, Arkansas**
LOCATION: City of Augusta, Woodruff County, Arkansas

DISTRICT: Little Rock District PREPARED: 5/24/2012
POC: CHIEF, COST ENGINEERING, Bruce W. Watson

This Estimate reflects the scope and schedule in report; Bank Stabilization, White River, City of Augusta, Woodruff County, Arkansas

WBS Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Doller Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
						Program Year (Budget EC): 2013								
						Effective Price Level Date: 1 OCT 12								
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Spent Thru: 1-Oct-12 ($K)		COST ($K)	CNTG ($K)	FULL ($K)
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
16	BANK STABILIZATION #N/A	$639	$151	24%	$789	0.9%	$644	$152	$796			$654	$154	$809
	CONSTRUCTION ESTIMATE TOTALS:	$639	$151		$789	0.9%	$644	$152	$796			$654	$154	$809
01	LANDS AND DAMAGES	$63	$13	20%	$75	0.9%	$63	$13	$76			$63	$13	$76
22	FEASIBILITY STUDY (CAP studies)									$100				$100
30	PLANNING, ENGINEERING & DESIGN	$50	$1	2%	$51	0.7%	$50	$1	$51			$52	$1	$53
31	CONSTRUCTION MANAGEMENT	$64	$5	8%	$69	0.7%	$64	$5	$70			$66	$6	$72
	PROJECT COST TOTALS:	$815	$170	21%	$985		$822	$171	**$993**	$100		$836	$174	$1,110

CHIEF, COST ENGINEERING, Bruce W. Watson

PROJECT MANAGER, Nancy Haseley

CHIEF, REAL ESTATE, Don Balch

CHIEF, PLANNING, Patricia Anslow

CHIEF, ENGINEERING, Tony Batey

CHIEF, CONSTRUCTION, DeJuan Carter

CHIEF, CONTRACTING, Sandra Easter

CHIEF, PM-PB, Brinda Jackson

for CHIEF, DPM, Craig Pierce

ESTIMATED FEDERAL COST:	65%	**$656**
ESTIMATED NON-FEDERAL COST:	35%	**$353**
FEDERAL FEASIBILITY CAP COSTS:	100%	**$100**
ESTIMATED TOTAL PROJECT COST:		**$1,110**

O&M OUTSIDE OF TOTAL PROJECT COST:

****** TOTAL PROJECT COST SUMMARY ******

****** CONTRACT COST SUMMARY ******

PROJECT: Alternative 2. Full Length LFSTP Bank Stabilization, White River, Augusta, Arkansas
DISTRICT: Little Rock District
PREPARED: 5/24/2012
LOCATION: City of Augusta, Woodruff County, Arkansas
POC: CHIEF, COST ENGINEERING, Bruce W. Watson
This Estimate reflects the scope and schedule in report; Bank Stabilization, White River, City of Augusta, Woodruff County, Arkansas

WBS Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Doller Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: 24-May-12 Effective Price Level: 1-Oct-12				Program Year (Budget EC): 2013 Effective Price Level Date: 1 OCT 12								
				RISK BASED										
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Mid-Point Date	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
	PHASE 1 or CONTRACT 1													
16	BANK STABILIZATION	$639	$151	24%	$789	0.9%	$644	$152	$796	2014Q1	1.6%	$654	$154	$809
	#N/A													
	CONSTRUCTION ESTIMATE TOTALS:	$639	$151	24%	**$789**		$644	$152	$796			$654	$154	$809
01	LANDS AND DAMAGES	$63	$13	20%	$75	0.9%	$63	$13	$76	2013Q2	0.3%	$63	$13	$76
30	PLANNING, ENGINEERING & DESIGN													
0.5%	Project Management	$3	$0	2.1%	$3	0.7%	$3	$0	$3	2014Q1	2.9%	$3	$0	$3
	Planning & Environmental Compliance			2.1%										
6.1%	Engineering & Design	$39	$1	2.1%	$40	0.7%	$39	$1	$40	2014Q1	2.9%	$40	$1	$41
	Engineering Tech Review ITR & VE			2.1%										
1.0%	Contracting & Reprographics	$6	$0	2.1%	$6	0.7%	$6	$0	$6	2014Q1	2.9%	$6	$0	$6
	Engineering During Construction			2.1%										
0.3%	Planning During Construction	$2	$0	2.1%	$2	0.7%	$2	$0	$2	2014Q1	2.9%	$2	$0	$2
	Project Operations			2.1%										
31	CONSTRUCTION MANAGEMENT													
9.5%	Construction Management	$61	$5	8.3%	$66	0.7%	$61	$5	$67	2014Q1	2.9%	$63	$5	$69
	Project Operation:			8.3%										
0.5%	Project Management	$3	$0	8.3%	$3	0.7%	$3	$0	$3	2014Q1	2.9%	$3	$0	$3
	CONTRACT COST TOTALS:	$815	$170		**$985**		$822	$171	$993			$836	$174	**$1,010**

Filename: Alt 2 Augusta Bank Stab 101508_TPCS_Mar2012.xlsx
TPCS

****** TOTAL PROJECT COST SUMMARY ******

****** CONTRACT COST SUMMARY ******

PROJECT: Alternative 2. Bank Stabilization, White River, Augusta, Arkansas
LOCATION: City of Augusta, Woodruff County, Arkansas
This Estimate reflects the scope and schedule in report; Bank Stabilization, White River, City of Augusta, Woodruff County, Arkansas

DISTRICT: Little Rock District PREPARED: 5/24/2012
POC: CHIEF, COST ENGINEERING, Bruce W. Watson

WBS Structure		ESTIMATED COST				PROJECT FIRST COST (Constant Doller Basis)				TOTAL PROJECT COST (FULLY FUNDED)				
		Estimate Prepared: 24-May-12 Effective Price Level: 1-Oct-12				Program Year (Budget EC): 2013 Effective Price Level Date: 1 OCT 12								
				RISK BASED										
WBS NUMBER	Civil Works Feature & Sub-Feature Description	COST ($K)	CNTG ($K)	CNTG (%)	TOTAL ($K)	ESC (%)	COST ($K)	CNTG ($K)	TOTAL ($K)	Mid-Point Date	INFLATED (%)	COST ($K)	CNTG ($K)	FULL ($K)
A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*J*	*P*	*L*	*M*	*N*	*O*
	PHASE 1 or CONTRACT 1													
16	BANK STABILIZATION	$639	$151	24%	$789	0.9%	$644	$152	$796	2013Q1		$644	$152	$796
	#N/A													
	CONSTRUCTION ESTIMATE TOTALS:	$639	$151	24%	**$789**		$644	$152	$796			$644	$152	$796
01	LANDS AND DAMAGES	$63	$13	20%	$75	0.9%	$63	$13	$76	2013Q2	0.3%	$63	$13	$76
30	PLANNING, ENGINEERING & DESIGN													
0.5%	Project Management	$3	$0	2.1%	$3	0.7%	$3	$0	$3	2014Q1	2.9%	$3	$0	$3
	Planning & Environmental Compliance			2.1%										
6.1%	Engineering & Design	$39	$1	2.1%	$40	0.7%	$39	$1	$40	2014Q1	2.9%	$40	$1	$41
	Engineering Tech Review ITR & VE			2.1%										
1.0%	Contracting & Reprographics	$6	$0	2.1%	$6	0.7%	$6	$0	$6	2014Q1	2.9%	$6	$0	$6
	Engineering During Construction			2.1%										
0.3%	Planning During Construction	$2	$0	2.1%	$2	0.7%	$2	$0	$2	2014Q1	2.9%	$2	$0	$2
	Project Operations			2.1%										
31	CONSTRUCTION MANAGEMENT													
9.5%	Construction Management	$61	$5	8.3%	$66	0.7%	$61	$5	$67	2014Q1	2.9%	$63	$5	$69
	Project Operation:			8.3%										
0.5%	Project Management	$3	$0	8.3%	$3	0.7%	$3	$0	$3	2014Q1	2.9%	$3	$0	$3
	CONTRACT COST TOTALS:	$815	$170		**$985**		$822	$171	$993			$826	$171	**$997**

101508 Alternative 2, Longitudinal Fill Stone Toe Protection for Entire Project Length, CAP Augusta, AR Section 14 Feasibility Study - PROJECT < $40M

Project Development Stage: Feasibility Study
Abbreviated Risk Analysis

Project Manager: Nancy Haseley

Meeting Date: 5/16 & 23/2012

PDT Members

Project Management: NAME Nancy Haseley

Contracting: NAME Darrell Montgomery

Real Estate: NAME Pat Bennett

H&H: NAME Cathy Funkhouser

Engineering & Design: NAME Aaron Cole

Cost Engineering: NAME George Losak

Planning, Environmental: NAME

Planning, Biologist: NAME Bob Singleton

Planning, Economist: NAME Russ Wallace

H&H: NAME

Construction, QA Manager: NAME Rod Gaines

101508 Alternative 2, Longitudinal Fill Stone Toe Protection for Entire Project Length, CAP Augusta, AR Section 14 Feasibility Study - PROJECT < $40M

Project Development Stage: Feasibility Study

Abbreviated Risk Analysis

	WBS	Item	Contract Cost		% Contingency	$ Contingency	Total
1	16 BANK STABILIZATION	Longitudinal Fill Stone Toe Protection Incl Keys	$ 576,863		25.00%	$ 144,215.75	$ 721,078.75
2	16 BANK STABILIZATION	Excavation including disposal offisite	$ 10,862		16.67%	$ 1,810.33	$ 12,672.33
3	16 BANK STABILIZATION	Reinforce public street	$ 30,847		10.42%	$ 3,213.23	$ 34,060.23
4	16 BANK STABILIZATION	Clearing and Grubbing	$ 11,676		10.42%	$ 1,216.25	$ 12,892.25
5		Item Name	$ -		0.00%	$ -	$ -
6		Item Name	$ -		0.00%	$ -	$ -
7		Item Name	$ -		0.00%	$ -	$ -
8		Item Name	$ -		0.00%	$ -	$ -
9		Item Name	$ -		0.00%	$ -	$ -
10		Item Name	$ -		0.00%	$ -	$ -
11		Item Name	$ -		0.00%	$ -	$ -
12		Remaining Construction Items (Total Const. Contract Cost minus Σ of items #1-11)	$ 8,319	1.3%	0.00%	$ -	$ 8,318.74
13	30 PLANNING, ENGINEERING, AND DESIGN	Planning, Engineering, & Design	$ 50,000		2.08%	$ 1,041.67	$ 51,041.67
14	31 CONSTRUCTION MANAGEMENT	Construction Management	$ 64,200		8.33%	$ 5,350.00	$ 69,550.00
		Total Construction Estimate	$ 638,567			$ 150,456	$ 789,022
		Total Planning, Engineering & Design	$ 50,000			$ 1,042	$ 51,042
		Total Construction Management	$ 64,200			$ 5,350	$ 69,550
		Total	$ 752,767			$ 156,847	$ 909,614

Weighted Construction Contingency	=	**23.6%**
Planning, Engineering & Design Contingency	=	**2.1%**
Construction Management Contingency	=	**8.3%**

01508 Alternative 2, Longitudinal Fill Stone Toe Protection for Entire Project Length, CAP Augusta, AR Section 14 Feasibility Study - PROJECT < $40

Project Development Stage: Feasibility Study
Abbreviated Risk Analysis

Meeting Date: 16-May-12

Risk Level

	Negligible	Marginal	Significant	Critical	Crisis
Very Likely	2	3	4	5	5
Likely	1	2	4	5	5
Unlikely	0	1	3	3	4
Very Unlikely	0	0	1	2	4

Risk Element	Affected WBS Item	Concerns	PDT Discussions & Conclusions (Include logic & justification for choice of Likelihood & Impact)	Likelihood	Impact	Risk Level
Project Scope						
PS-1	Longitudinal Fill Stone Toe Protection Incl Keys	Upper length fixed. Could be shorter.	Protection could be shorter and still protect the sewer line.	Very Unlikely	Negligible	0
PS-2	Excavation including disposal offisite	No concerns. Also limited by historically significant bldgs.	Purpose of the project is to protect important infrastructure.	Unlikely	Negligible	0
PS-3	Reinforce public street	loaded trucks traveling on this street or area.		LIKELY	Marginal	2
PS-4	Clearing and Grubbing	No change envisioned.		Unlikely	Marginal	1
PS-5	Item Name			Very Unlikely	Negligible	0
PS-6	Item Name			Very Unlikely	Negligible	0
PS-7	Item Name			Very Unlikely	Negligible	0
PS-8	Item Name			Very Unlikely	Negligible	0
PS-9	Item Name			Very Unlikely	Negligible	0
PS-10	Item Name			Very Unlikely	Negligible	0
PS-11	Item Name			Very Unlikely	Negligible	0
PS-12	Remaining Construction Items	Minor. Not likely to change	Designer to recompute.	Very Unlikely	Negligible	0
PS-13	Planning, Engineering, & Design	Scope is fixed. Coordination with City's work in kind.		Unlikely	Marginal	1
PS-14	Construction Management	Scope is fixed. Coordination with City's work in kind.		LIKELY	Marginal	2

01508 Alternative 2, Longitudinal Fill Stone Toe Protection for Entire Project Length, CAP Augusta, AR Section 14 Feasibility Study - PROJECT < $40

Project Development Stage: Feasibility Study
Abbreviated Risk Analysis

Meeting Date: 16-May-12

Risk Level

	Negligible	Marginal	Significant	Critical	Crisis
Very Likely	2	3	4	5	5
Likely	1	2	4	5	5
Unlikely	0	1	3	3	4
Very Unlikely	0	0	1	2	4

Risk Element	Affected WBS Item	Concerns	PDT Discussions & Conclusions (Include logic & justification for choice of Likelihood & Impact)	Likelihood	Impact	Risk Level
Acquisition Strategy						
AS-1	Longitudinal Fill Stone Toe Protection Incl Keys		Limited competition with MATOC.	LIKELY	Marginal	2
AS-2	Excavation including disposal offisite		Limited competition with MATOC.	LIKELY	Marginal	2
AS-3	Reinforce public street			LIKELY	Marginal	2
AS-4	Clearing and Grubbing			LIKELY	Marginal	2
AS-5	Item Name			Very Unlikely	Negligible	0
AS-6	Item Name			Very Unlikely	Negligible	0
AS-7	Item Name			Very Unlikely	Negligible	0
AS-8	Item Name			Very Unlikely	Negligible	0
AS-9	Item Name			Very Unlikely	Negligible	0
AS-10	Item Name			Very Unlikely	Negligible	0
AS-11	Item Name			Very Unlikely	Negligible	0
AS-12	Remaining Construction Items			Very Unlikely	Negligible	0
AS-13	Planning, Engineering, & Design			Very Unlikely	Negligible	0
AS-14	Construction Management			Very Unlikely	Negligible	0

01508 Alternative 2, Longitudinal Fill Stone Toe Protection for Entire Project Length, CAP Augusta, AR Section 14 Feasibility Study - PROJECT < $40

Project Development Stage: Feasibility Study
Abbreviated Risk Analysis

Meeting Date: 16-May-12

Risk Level

	Negligible	Marginal	Significant	Critical	Crisis
Very Likely	2	3	4	5	5
Likely	1	2	4	5	5
Unlikely	0	1	3	3	4
Very Unlikely	0	0	1	2	4

Risk Element	Affected WBS Item	Concerns	PDT Discussions & Conclusions (Include logic & justification for choice of Likelihood & Impact)	Likelihood	Impact	Risk Level
Construction Complexity						
CC-1	Longitudinal Fill Stone Toe Protection Incl Keys	Trees and boat docks with their anchors. Numerous boats to move and return after construction. Construction is simple. Must work around trees. Not sure of land ownership. Landowners have agreed to move docks and boats at their cost.	Bank is not too tall. City is not aware of the projects true complexity. Slope under water is very steep.	LIKELY	Marginal	2
CC-2	Excavation including disposal offisite	Some underwater excavation.		LIKELY	Marginal	2
CC-3	Reinforce public street	Simple. Shape and add gravel.	Contractor's responsibility to repair damage.	Very Unlikely	Negligible	0
CC-4	Clearing and Grubbing	Simple. Downstream.	Access? Some trees in water. Extra reach. Pull from side into river and release.	LIKELY	Negligible	1
CC-5	Item Name			Very Unlikely	Negligible	0
CC-6	Item Name			Very Unlikely	Negligible	0
CC-7	Item Name			Very Unlikely	Negligible	0
CC-8	Item Name			Very Unlikely	Negligible	0
CC-9	Item Name			Very Unlikely	Negligible	0
CC-10	Item Name			Very Unlikely	Negligible	0
CC-11	Item Name			Very Unlikely	Negligible	0
CC-12	Remaining Construction Items	Simple turfing.		Very Unlikely	Negligible	0
CC-13	Planning, Engineering, & Design	No changes.		Very Unlikely	Negligible	0
CC-14	Construction Management	Extra time for QA.		Very Unlikely	Negligible	0
Volatile Commodities						

01508 Alternative 2, Longitudinal Fill Stone Toe Protection for Entire Project Length, CAP Augusta, AR Section 14 Feasibility Study - PROJECT < $40

Project Development Stage: Feasibility Study
Abbreviated Risk Analysis

Meeting Date: 16-May-12

Risk Level

	Negligible	Marginal	Significant	Critical	Crisis
Very Likely	2	3	4	5	5
Likely	1	2	4	5	5
Unlikely	0	1	3	3	4
Very Unlikely	0	0	1	2	4

Risk Element	Affected WBS Item	Concerns	PDT Discussions & Conclusions (Include logic & justification for choice of Likelihood & Impact)	Likelihood	Impact	Risk Level
VC-1	Longitudinal Fill Stone Toe Protection Incl Keys	Gas and diesel only. Riprap only purchased item for project.		LIKELY	Marginal	2
VC-2	Excavation including disposal offisite	Gas and diesel only.	Small quantity	LIKELY	Negligible	1
VC-3	Reinforce public street	Small quantity		LIKELY	Negligible	1
VC-4	Clearing and Grubbing	Small quantity		LIKELY	Negligible	1
VC-5	Item Name			Very Unlikely	Negligible	0
VC-6	Item Name			Very Unlikely	Negligible	0
VC-7	Item Name			Very Unlikely	Negligible	0
VC-8	Item Name			Very Unlikely	Negligible	0
VC-9	Item Name			Very Unlikely	Negligible	0
VC-10	Item Name			Very Unlikely	Negligible	0
VC-11	Item Name			Very Unlikely	Negligible	0
VC-12	Remaining Construction Items	seeding. Small quantity.		Unlikely	Negligible	0
VC-13	Planning, Engineering, & Design	Small project.		Very Unlikely	Negligible	0
VC-14	Construction Management	Higher cost per trip due to higher oil prices.		LIKELY	Negligible	1
Quantities						
Q-1	Longitudinal Fill Stone Toe Protection Incl Keys	Surveys are good. All rock is placed below ordinary high water. Slope under water is steep.	Area if applicable problem is limited.	LIKELY	Critical	5

01508 Alternative 2, Longitudinal Fill Stone Toe Protection for Entire Project Length, CAP Augusta, AR Section 14 Feasibility Study - PROJECT < $40

Project Development Stage: Feasibility Study
Abbreviated Risk Analysis

Meeting Date: 16-May-12

Risk Level

	Negligible	Marginal	Significant	Critical	Crisis
Very Likely	2	3	4	5	5
Likely	1	2	4	5	5
Unlikely	0	1	3	3	4
Very Unlikely	0	0	1	2	4

Risk Element	Affected WBS Item	Concerns	PDT Discussions & Conclusions (Include logic & justification for choice of Likelihood & Impact)	Likelihood	Impact	Risk Level
Q-2	Excavation including disposal offisite	Surveys are good. Quantities not likely to change		Unlikely	Marginal	1
Q-3	Reinforce public street	small area. Not a big impact to the project.		Unlikely	Negligible	0
Q-4	Clearing and Grubbing	Small area.		Very Unlikely	Negligible	0
Q-5	Item Name			Very Unlikely	Negligible	0
Q-6	Item Name			Very Unlikely	Negligible	0
Q-7	Item Name			Very Unlikely	Negligible	0
Q-8	Item Name			Very Unlikely	Negligible	0
Q-9	Item Name			Very Unlikely	Negligible	0
Q-10	Item Name			Very Unlikely	Negligible	0
Q-11	Item Name			Very Unlikely	Negligible	0
Q-12	Remaining Construction Items	minimal.		Very Unlikely	Negligible	0
Q-13	Planning, Engineering, & Design	Small project. No change to project.		Very Unlikely	Negligible	0
Q-14	Construction Management			Unlikely	Marginal	1
Fabrication & Project Installed Equipment						
FI-1	Longitudinal Fill Stone Toe Protection Incl Keys	None.	No fabricated equipment. Excavation and riprap only.	Very Unlikely	Negligible	0
FI-2	Excavation including disposal offisite			Very Unlikely	Negligible	0

01508 Alternative 2, Longitudinal Fill Stone Toe Protection for Entire Project Length, CAP Augusta, AR Section 14 Feasibility Study - PROJECT < $40

Project Development Stage: Feasibility Study
Abbreviated Risk Analysis

Meeting Date: 16-May-12

Risk Level

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Likely	1	2	4	5	5
Unlikely	0	1	3	3	4
Very Unlikely	0	0	1	2	4
	Negligible	Marginal	Significant	Critical	Crisis

Risk Element	Affected WBS Item	Concerns	PDT Discussions & Conclusions (Include logic & justification for choice of Likelihood & Impact)	Likelihood	Impact	Risk Level
FI-3	Reinforce public street			Very Unlikely	Negligible	0
FI-4	Clearing and Grubbing			Very Unlikely	Negligible	0
FI-5	Item Name			Very Unlikely	Negligible	0
FI-6	Item Name			Very Unlikely	Negligible	0
FI-7	Item Name			Very Unlikely	Negligible	0
FI-8	Item Name			Very Unlikely	Negligible	0
FI-9	Item Name			Very Unlikely	Negligible	0
FI-10	Item Name			Very Unlikely	Negligible	0
FI-11	Item Name			Very Unlikely	Negligible	0
FI-12	Remaining Construction Items			Very Unlikely	Negligible	0
FI-13	Planning, Engineering, & Design			Very Unlikely	Negligible	0
FI-14	Construction Management			Very Unlikely	Negligible	0
Cost Estimating Method						
CE-1	Longitudinal Fill Stone Toe Protection Incl Keys	Quantities from designer. No plans provided.		Very Unlikely	Negligible	0
CE-2	Excavation including disposal offisite	Quantities from designer.		Very Unlikely	Negligible	0
CE-3	Reinforce public street	Cost estimate prepared current guidance.		Very Unlikely	Negligible	0

01508 Alternative 2, Longitudinal Fill Stone Toe Protection for Entire Project Length, CAP Augusta, AR Section 14 Feasibility Study - PROJECT < $40

Project Development Stage: Feasibility Study
Abbreviated Risk Analysis

Meeting Date: 16-May-12

Risk Level

	Negligible	Marginal	Significant	Critical	Crisis
Very Likely	2	3	4	5	5
Likely	1	2	4	5	5
Unlikely	0	1	3	3	4
Very Unlikely	0	0	1	2	4

Risk Element	Affected WBS Item	Concerns	PDT Discussions & Conclusions (Include logic & justification for choice of Likelihood & Impact)	Likelihood	Impact	Risk Level
CE-4	Clearing and Grubbing	Cost estimate prepared current guidance.		Very Unlikely	Negligible	0
CE-5	Item Name			Very Unlikely	Negligible	0
CE-6	Item Name			Very Unlikely	Negligible	0
CE-7	Item Name			Very Unlikely	Negligible	0
CE-8	Item Name			Very Unlikely	Negligible	0
CE-9	Item Name			Very Unlikely	Negligible	0
CE-10	Item Name			Very Unlikely	Negligible	0
CE-11	Item Name			Very Unlikely	Negligible	0
CE-12	Remaining Construction Items	None. Low cost		Very Unlikely	Negligible	0
CE-13	Planning, Engineering, & Design	None		Very Unlikely	Negligible	0
CE-14	Construction Management	none.		Very Unlikely	Negligible	0
External Project Risks						
EX-1	Longitudinal Fill Stone Toe Protection Incl Keys	No risks. This is continuing authorities funded. Will use the model PPA.	No delays foreseen	Very Unlikely	Negligible	0
EX-2	Excavation including disposal offisite	No risks. This is continuing authorities funded. Will use the model PPA.	No delays foreseen	Very LIKELY	Negligible	2
EX-3	Reinforce public street	No risks. This is continuing authorities funded. Will use the model PPA.	No delays foreseen	Unlikely	Negligible	0
EX-4	Clearing and Grubbing	No risks. This is continuing authorities funded. Will use the model PPA.	No delays foreseen	Very Unlikely	Negligible	0

01508 Alternative 2, Longitudinal Fill Stone Toe Protection for Entire Project Length, CAP Augusta, AR Section 14 Feasibility Study - PROJECT < $40

Project Development Stage: Feasibility Study
Abbreviated Risk Analysis

Meeting Date: 16-May-12

Risk Level

	Negligible	Marginal	Significant	Critical	Crisis
Very Likely	2	3	4	5	5
Likely	1	2	4	5	5
Unlikely	0	1	3	3	4
Very Unlikely	0	0	1	2	4

Risk Element	Affected WBS Item	Concerns	PDT Discussions & Conclusions (Include logic & justification for choice of Likelihood & Impact)	Likelihood	Impact	Risk Level
EX-5	Item Name			Very Unlikely	Negligible	0
EX-6	Item Name			Very Unlikely	Negligible	0
EX-7	Item Name			Very Unlikely	Negligible	0
EX-8	Item Name			Very Unlikely	Negligible	0
EX-9	Item Name			Very Unlikely	Negligible	0
EX-10	Item Name			Very Unlikely	Negligible	0
EX-11	Item Name			Very Unlikely	Negligible	0
EX-12	Remaining Construction Items	Other external risks in the previous items		Very Unlikely	Negligible	0
EX-13	Planning, Engineering, & Design			Very Unlikely	Negligible	0
EX-14	Construction Management			Very Unlikely	Negligible	0

101508 Alternative 2, Longitudinal Fill Stone Toe Protection for Entire Project Length, CAP Augusta, AR Section 14 Feasibility Study - PROJECT < $40M

Project Development Stage: Feasibility Study

Abbreviated Risk Analysis

		Selected Work Breakdown Structure Items													
		Longitudinal Fill Stone Toe Protect Incl Keys	Excavation including disposal offsite	Reinforce public street	Clearing and Grubbing	Item Name	Item Name	Item Name	Item Name	Item Name	Item Name	Item Name	Remaining Construction Item	Planning, Engineering, & Design	Construction Management
Typical Risk Elements	Project Scope	-	-	2	1	-	-	-	-	-	-	-	-	1	2
	Acquisition Strategy	2	2	2	2	-	-	-	-	-	-	-	-	-	-
	Construction Complexity	2	2	-	1	-	-	-	-	-	-	-	-	-	-
	Volatile Commodities	2	1	1	1	-	-	-	-	-	-	-	-	-	1
	Quantities	5	1	-	-	-	-	-	-	-	-	-	-	-	1
	Fabrication & Project Installed Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cost Estimating Method	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	External Project Risks	-	2	-	-	-	-	-	-	-	-	-	-	-	-

LITTLE ROCK DISTRICT COST ENGINEERING SECTION TECHNICAL REVIEW CHECKLIST

Project Name:	CAP, City of Augusta, Arkansas Section 14 Feasibility Study (P2 No. 101508)
Project Location:	Woodruff County, Northeast Arkansas
Description:	The project is to stabilize 2,000 feet of White River's East Bank starting in the Southwest portion of Augusta, Woodruff County, Arkansas to protect the City's sanitary sewer pipe.

Reviewer's Signature: WAGENER.PAUL.G.1232176020 5/30/2012

Circle Level of Estimate: *Reconnaissance* | *Baseline/Feasibility* | *DM* | *Plans & Specs* | *Other (specify)*

Circle Type of Estimate: *Military* | *Civil* | *HTRW*

INSTRUCTIONS: Check items with an appropriate "Yes" or "No" answer. Check "N/A" for items that do not pertain to the level or type of estimate being reviewed. For items checked "No", submit review comments on a appropriate "Comment Review Form."

Yes	No	N/A		
			1.00	**GENERAL REQUIREMENTS**
X			1.01	Has reviewer been provided a complete detailed estimate and final project documents?
X			1.02	Does reviewer have a clear definition of scope?
X			1.03	Is the estimate prepared in MCACES?
X			1.04	Is cost estimate prepared to a level of detail commensurate with the information provided?
			2.00	**PROJECT DESCRIPTION (General Details) in Project Notes**
			2.10	**Basis of Design**
X			2.11	Do the estimate's project notes give a clear definition of scope?
X			2.12	Do project notes indicate type of estimate, contract number? (Example: Feasibility report, dated _____ ; DM #_____ , dated _____)
X			2.13	Is cost estimate using the appropriate equipment, crew, and UPB databases.
X			2.14	Is cost estimate using the proper labor database as required by CESWL-ED-C memorandum dated 1 October 1996, subject: Labor Rates Study?
X			2.15	Are effective dates for labor, equipment, material pricing given?
			2.20	**Construction Schedule**
X			2.21	Does the estimate make appropriate use of overtime to meet project schedule requirements?
X			2.22	Was a project construction time determined by using either a bar chart and Microsoft Project 2007?
X			2.23	Does the construction contract period include a minimum of thirty calendar days for contract submittals and sixty calendar days for contract close-out?
X			2.24	Does the construction schedule include appropriate time for delivery of materials?
X			2.25	Have weather days and holidays been included in the construction calendar?
X			2.26	Does the construction schedule appear to be a reasonable length of time and sequence of work?
X			2.27	Is the critical path clearly identified?
			2.30	**Project Construction**
X			2.31	Was contractor's site access considered?

LITTLE ROCK DISTRICT COST ENGINEERING SECTION TECHNICAL REVIEW CHECKLIST

Project Name: CAP, City of Augusta, Arkansas Section 14 Feasibility Study (P2 No. 101508)

Project Location: Woodruff County, Northeast Arkansas

Description: The project is to stabilize 2,000 feet of White River's East Bank starting in the Southwest portion of Augusta, Woodruff County, Arkansas to protect the City's sanitary sewer pipe.

X			2.32	Are borrow areas identified?
X			2.33	Have all necessary temporary utilities been considered?
X			2.34	Is construction methodology sound?
X			2.35	Does the estimate appropriately consider unusual conditions (soil, water, weather)?
X			2.36	Does the estimate appropriately consider unique techniques of construction?
X			2.37	Is equipment/labor availability & distance traveled considered?
X			2.38	Does the estimate appropriately consider any environmental concerns (HTRW, wildlife, etc.)?
X			2.39	**Question: At this point do you, the reviewer, have a good understanding of the project?**
			3.00	**GENERAL ESTIMATE LAYOUT**
X			3.01	Has cost estimate been structured in the appropriate work breakdown structure?
X			3.02	Has the cost estimate been prepared in accordance with CESWL-ED-C memorandum dated 31 October 1996, subject: Office Procedure for Creating A Bid Schedule From Standard Work Breakdown Structure?
X			3.03	Did estimator use current and applicable software (MCACES MII or correct version of CEDEP, etc.)?
X			3.04	Is the most detailed level of the cost estimate related to a construction task which is performed by specific labor crew?
			4.00	**OWNER, INDIRECTS AND MARKUPS**
X			4.01	Are appropriate taxes (sales, user, etc.) included as may be required?
X			4.02	Is Prime's Field Office Overhead (FOOH) calculated?
X			4.03	Is Prime's FOOH complete, follow FOOH model, correct times for superintendent and other FOOH personnel and equipment?
X			4.04	Does Prime's Overhead look reasonable for this type of work?
X			4.05	Was Prime's Profit calculated using the weighted guideline method?
	X		4.06	Has the bond been correctly calculated and does it seem reasonable? ***Bond is Running Amount***
X			4.07	Are subcontractor assignments reasonable?
X			4.08	Does subcontractor's FOOH and Home Office Overhead look reasonable for this type of work?
X			4.09	Is the profit for subcontractors performing a major part of the total work, calculated using the weighted guideline method?
X			4.10	Is Price Level Date Correct?
X			4.11	Does the design contingency amount reflect the level of design and impact from cost? ***Contingency Shown on TPCS***
X			4.12	Is the design contingency applied at the lowest applicable title level?
		X	4.13	For military projects, does the cost estimate include 5.7% for S&A?
		X	4.14	For military projects, does the cost estimate include a 5.0% construction contingency?
x			4.15	Is escalation taken into account and correctly calculated to the midpoint of construction? ***Escalation shown on TPCS***

LITTLE ROCK DISTRICT COST ENGINEERING SECTION TECHNICAL REVIEW CHECKLIST

Project Name: CAP, City of Augusta, Arkansas Section 14 Feasibility Study (P2 No. 101508)

Project Location: Woodruff County, Northeast Arkansas

Description: The project is to stabilize 2,000 feet of White River's East Bank starting in the Southwest portion of Augusta, Woodruff County, Arkansas to protect the City's sanitary sewer pipe.

X			**4.16**	Have costs for the 30 (Engineering and Design) and 31 (Construction Management) accounts been provided by the Project Manager and accurately
X			**4.17**	Are Costs for 01 account (Lands and Damages) provided by Real Estate Division and accurately input into MCACES , if applicable?
X			**4.18**	Are Costs for 18 account (Culture Resource Preservation) provided by Water Resources & Environmental Branch and accurately input into MCACES, if
X			**4.19**	Do costs roll up correctly?
			5.00	**DETAILS**
X			**5.01**	Are title and subtitle quantities and unit of measurements properly installed?
X			**5.02**	Do quantities look reasonable?
X			**5.03**	Are quantities accurate for critical costs items?
X			**5.04**	Does layout of work look reasonable? i.e. Subwork?, Overtime?
X			**5.05**	Is Mob & Demob total cost reasonable?
X			**5.06**	Do crew assembly makeups look reasonable?.
X			**5.07**	Does estimator state in title notes assumptions made for development of cost?
X			**5.08**	Are note fields used to briefly explain the details?
X			**5.09**	Does estimate contain specific detail to make judgment on whether costs are correct?
X			**5.10**	Do notes for earthwork tasks specify use of proper shrink, swell & bulking and proper UOM (BCY, CCY, LCY).
X			**5.11**	Do quote Unit of Measures (UOM's) for earthwork match installation UOM's?
X			**5.12**	Do production rates for crews look reasonable?.
X			**5.13**	Does Estimate contain Sub Quotes (dependent on type of estimate.)?
X			**5.14**	Are there quotes for major material costs & are they current and complete - include freight, taxes, FOB where, etc.?
X			**5.15**	Does the project settings report for O.T. and modifiers look reasonable?
X			**5.16**	Does estimate match the design documents?
X			**5.17**	Are appropriate allowances clearly identified and applied in either the quantity takeoffs or the estimate to items where there is loss due to handling, placement, cutting, transportation, contamination, etc.?
		X	**5.18**	Are costs included for testing concrete, soils, pavements, HTRW, HVAC Balancing, electrical start-up, etc.?
		X	**5.19**	Does mechanical detail reflect the equipment list provided on the project plans?
		X	**5.20**	Does electrical detail reflect the equipment list provided on the project plans?
			6.00	**AF Form 1178/Army ENG Form 3086**
		X	**6.01**	Has an AF Form 1178 been prepared using the electronic format provided by Cost Engineering Branch?
		X	**6.02**	Are blocks 1 through 11 of the AF Form 1178 properly filled out?
		X	**6.03**	Is an accurate category code number provided for each primary facility?
		X	**6.04**	Has an AF Form 1178 been prepared in accordance with CESWL-ED-C memorandum dated 15 December 1995, subject: Preparation of AF Form 1178

LITTLE ROCK DISTRICT COST ENGINEERING SECTION TECHNICAL REVIEW CHECKLIST

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Project Location:	Woodruff County, Northeast Arkansas
Description:	The project is to stabilize 2,000 feet of White River's East Bank starting in the Southwest portion of Augusta, Woodruff County, Arkansas to protect the City's sanitary sewer pipe.

		X	**6.05**	Has one AF Form 1178 been prepared showing only the base bid CWE and a second AF Form 1178 showing a CWE which includes both the base bid and a combination of alternate bid items that produces the greatest CWE?
		X	**6.06**	Has an Army ENG Form 3086 been prepared using the TRACES PC-Cost Budget Estimating System?
		x	**6.07**	Has one Army ENG Form 3086 been prepared showing only the base bid CWE and a second Army ENG Form 3086 showing a CWE which includes both the base bid and a combination of alternate bid items that produces the greatest

SWL – Cost Engineering Section REVIEW COMMENTS

☐ DESIGN MEMO ☐ ENV IMPACT STATEMENT ☐ ___PLANS & SPECIFICATIONS X REPORT – Feasibility Study ☐ OTHER	X ENGR & CONST DIV CESWL-EC-DC X ☐ OPERATIONS DIV CESWL-OP- ☐ REAL ESTATE DIV CESWL-RE- ☐ RESIDENT ENGINEER CESWL-CO- ☐ CESWL-	☐ CESWL-OC- ☐ CESWL-LO- ☐ CESWL-IM- ☐ CESWL-CT- ☐ CESWL-PD ☐ CESWL-SO

PROJECT: CAP, City of Augusta, Arkansas Section 14 Feasibility Study (P2 No. 101508)	LOCATION: Woodruff County, Northeast Arkansas	ACTION A-CONCUR D-DO NOT CONCUR
REVIEWER: PGW	DATE: 30 May 2012	ANNOTATED BY

CMT. NO.	PARA OR DWG NO.	COMMENT (TYPE OR PRINT)		
1	Cost Estimate	Consider using calculated bond. Changed to calculated bond	C	GL
2	Cost Estimate	Information provided indicates that the sponsor will provide work in kind, and therefore cost estimate reflects a low non-Federal amount. Please include a note to reflect this in the MII project notes. note added.	C	GL
3	Cost Estimate	The Cost Estimate has several items with zero quantities. The information provided indicates that the current selected Plan does not include this work, but it may be added back at a later date. Please include a note to reflect this in the MII project notes. Deleted folders w/zero Quantities	C	GL
4	Cost Estimate.	Escalation and Contingency are shown on the TPCS and not on the cost estimate. Please include a note to reflect this in the MII project notes to avoid confusion.	C	GL
5	TPCS	Information provided indicates that Federal/non-Federal split should be 65/35; TPCS shows 50/50. Please Verify. Corrected to 65% Fed/35% NF	C	GL
6				
7				
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17				

Appendix D –
Sponsor's Letter of Intent

White River, Augusta, Arkansas,

Woodruff County, Arkansas

City of Augusta

Telephone
870-347-5656

210 Main Street • P.O. Box 502
AUGUSTA, ARKANSAS 72006

Fax
870-347-2436

March 7, 2011

Colonel Glen A. Masset
District Engineer
Little Rock District Corps of Engineers
700 West Capitol Ave.
Little Rock, AR 72201

Dear Colonel Masset:

This letter is to express the intent of the City of Augusta, Arkansas to enter into a Project Partnership Agreement (PPA) for the design and construction of the City of Augusta, AR, Emergency Stream bank Protection Project. The City of Augusta is willing and has the statutory authority and overall ability to sign a PPA.

We are aware we are responsible for 35% of the costs of design and implementation of the project, currently estimated to be $25,000 plus lands, easements, rights-of-way, relocations and disposals. Of that 35%, a minimum 5% cash contribution is required which cannot be accomplished through in-kind contributions. We understand, if agreed upon as mutually acceptable, all or part of the sponsor's share of 30% after the 5% minimum cash contribution may be performed as in-kind services. We also understand that this is a projected cost of design and implementation and may be subject to change with the contract proposal and subsequent negotiations.

The City of Augusta, as the local sponsor, intends to share in the cost of construction. We will provide without cost to the United States all lands, easements, right-of-ways, and relocations, including suitable borrow and disposal placement areas (LERRD), as determined by the federal government to be necessary for the construction of the project. The value of the LERRD will be included in the total project costs and credited toward the sponsor's share of project costs, as defined in the PPA for construction. We are willing and able to assume responsibility for any operation, maintenance, repair, replacement, and rehabilitation of project features following completion of project construction.

Sincerely,

Rocky Tidwell

Mayor Rocky Tidwell

Appendix E –
Financial Capacity
Self Certification

White River, Augusta, Arkansas,

Woodruff County, Arkansas

NON-FEDERAL SPONSOR'S
SELF-CERTIFICATION OF FINANCIAL CAPABILITY
FOR AGREEMENT

I, Rocky Tidwell, do hereby certify that I am the Chief Financial Officer as the . Auditor for the City of Augusta; that I am aware of the financial obligations of the Non-Federal Sponsor for the City of Augusta, AR, Section 14 Project; and that the City of Augusta has the financial capability to satisfy the Non-Federal Sponsor's obligation under the Project Partnership Agreement.

IN WITNESS WHEREOF, I have made and executed this certification this 4 day of March, 2011.

BY: Rocky Tidwell

TITLE: Mayor

DATE: 3-4-2011